# HYGEIA

## THE HEALTH MAGAZINE

*Published by the American Medical Association*

*August, 1927* **Ivy Poisoning** *25 Cents*

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# HYGEIA
## THE HEALTH MAGAZINE

*Published by the American Medical Association*
*535 North Dearborn Street, Chicago*

VOLUME 5 AUGUST, 1927 NUMBER 8

### WHO'S WHO IN THIS ISSUE

MRS. G. H. MARSHALL tells in this issue how she herself solved a problem that puzzles many mothers. DR. HERMAN GOODMAN, who specializes in diseases of the skin, has been a frequent contributor to HYGEIA. DR. J. HOWARD BEARD is associated with the University of Illinois in the health service.

LOUIS G. DEARMAND, D.D.S., writes from his own experience with advertising dentists and gives some inside information on their methods. GEORGE H. DACY is a frequent contributor to HYGEIA and other national periodicals. DR. KARL A. MENNINGER is associated with a large clinic specializing in nervous and mental diseases. DR. FRANK HOWARD RICHARDSON, child psychologist, writes this month on another manifestation of nervousness in children.

DR. WILLIAM J. MAYO concludes his article on the senses. ANNA DEAN DULANEY is bacteriologist at the University of Missouri. DR. L. D. HUBBARD is senior physician on the female service at St. Elizabeth's Hospital, Washington, D. C. DR. B. S. HERBEN has long been a public health worker.

DR. H. W. HILL is professor of bacteriology and other sciences at the University of British Columbia. SISTER ROSE GENEVIEVE is connected with a large western hospital and sanatorium. A. A. MOWBRAY is associated with the National Safety Council. JAMES A. TOBEY, Dr.P.H., is author of a book on the national government and public health and an authority on the various health activities of our federal services. He is a frequent contributor to HYGEIA. ELIZABETH BLAINE JENKINS is well known to HYGEIA'S younger readers.

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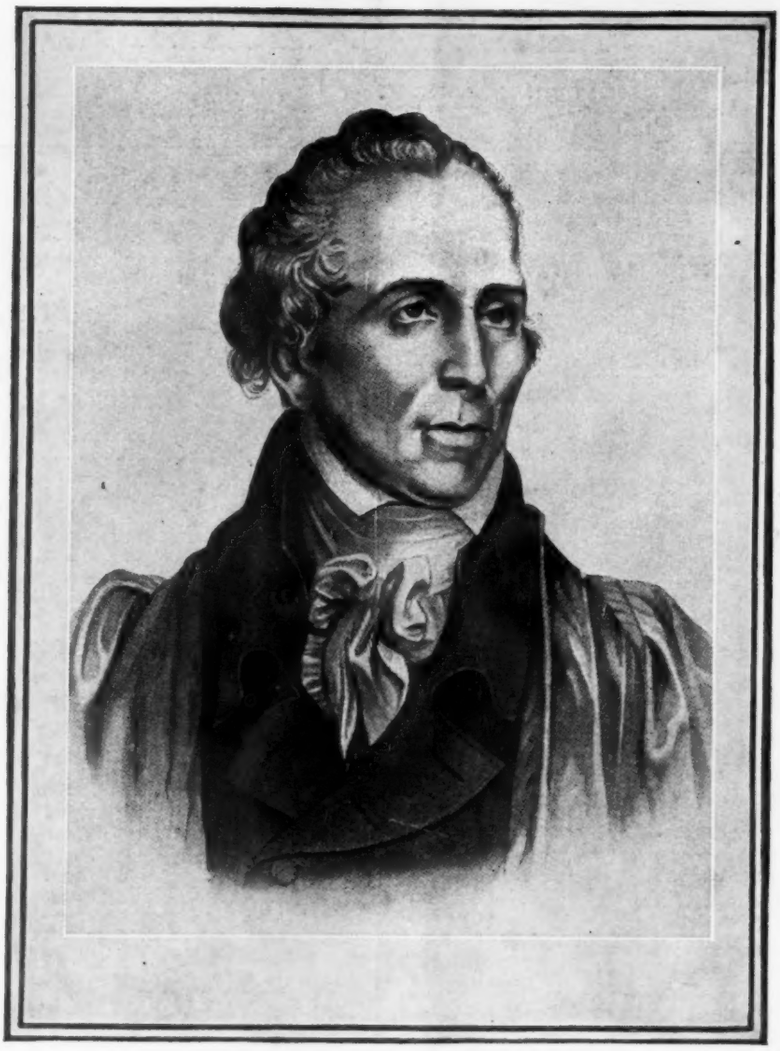


JOHN WARREN

# HEROES OF AMERICAN MEDICINE

## IV. The Warrens

*AMONG the great surgeons of the Revolutionary War was Dr. Joseph Warren of Boston. He was at the time 35 years old, and is reported to have been handsome, accomplished and a good fellow. He proved himself to be a thorn in the side of the English enemy and a hero to his American friends.*

*Dr. Joseph Warren started Paul Revere on his famous ride. He was elected president of the Provincial Congress, and three days before Bunker Hill was taken he was appointed major-general of the colonial forces. Previously he had been appointed to take the position of physician-general in the army but declined, preferring active service. At Bunker Hill he was offered command by Prescott but again declined, taking a musket in the ranks. There he died fighting to the end for American liberty.*

*Dr. John Warren, his brother, was twelve years younger, and, after studying medicine with Joseph, settled in Salem, Mass., where he had been practicing one year when the Revolutionary War came. He went with his command to Cambridge after the battle of Lexington and remained three years with the army. John Warren, who was but 23 years old, proved himself to be a zealous and intelligent officer.*

*After the close of the war for independence, John Warren aided in the launching of Harvard Medical College, performed the first amputation of the shoulder joint done in this country, gave a series of lectures on anatomy, and was elected professor of anatomy and surgery in the new medical school.*

*The younger Warren was a man of somewhat delicate physique and through life suffered from various ailments; he was an incessant worker. It is reported of him that his lectures were brilliant, for he talked without notes, and his eloquence increased with the years. He died in 1815, at the age of 62 years.*

*I peeled the vegetables, mended the clothes and even ironed in Elizabeth's room.*

# Entertaining the Convalescent Child

*By Mrs. G. H. Marshall*

THE sick child in the home always brings perplexing problems, especially when the mother must be nurse as well as housewife. Since it has fallen to me lately to work out a problem of this kind, I wondered if my experiences would help some other mother who has a sick child to care for.

Elizabeth was 6 years old on the twenty-third of March and had nearly finished the work of the first grade. So far as her parents knew, she was in fairly good health, except for a slight heart leakage, the result of a series of attacks of influenza. Without the least warning of any kind, Elizabeth awoke one morning with an acute attack of tonsillitis. A physician was called in to see her before noon, but, in spite of good care, the poison from the infected tonsils got into the blood stream and went straight to the heart. In a little more than twenty-four hours two physicians had pronounced Elizabeth's case endocarditis and had given her a bed sentence of three months. Elizabeth was an especially active child and had always been difficult to care for during an illness.

"With great care and a long rest, she will get well," said one physician kindly. "For a while, I would feed her, turn her and avoid letting her reach for anything."

"Oh, doctor," I gasped, "she is so active; it seems almost impossible to do that."

"She will cooperate," said the doctor. "She is a wise little girl and she wants to get well."

"I can try and will do my very best," I promised.

During the first few feverish days, Elizabeth was a constant care, but, much to the surprise of the doctor, her recovery was rapid. Beginning with the fourth day of her illness, her temperature and pulse became normal and continued to be so. The doctor could not account for the rapidity of her improvement, but the bed sentence remained unchanged. Elizabeth must be quiet.

Prayerfully I asked for guidance that I might be given strength and wisdom to care for my sick child, to entertain her all day, and at the same time to look after a lively 3 year old girl and keep the house going. I had some help with the heavy cleaning and had most of my wash-

ing and ironing done, and this is the way I managed with the rest of my duties.

Early in the morning before the children awoke, I slipped quietly down into the kitchen and, while I was getting breakfast, planned the meals for the rest of the day, trying if possible to make a simple dessert for dinner. I saved much of the peeling of vegetables, mending of clothes and even the ironing to do in Elizabeth's room. I always planned, when I went to the kitchen on an errand for Elizabeth, to wipe a few dishes, to sweep a floor, or to do some little bit of work that would really count for something.

The housecleaning season was just starting. I found I could clean Elizabeth's bedroom and some of the adjoining rooms, if I talked all the time and stepped in to see her often. I tried to make her bedroom as pretty and to give it as much of the outdoor atmosphere as possible. Every day I kept fresh flowers on the dresser and on Elizabeth's little table. On the curtain of her bedroom I pinned bright pictures of birds, flowers and animals.

When I had to leave the room for a little while, I interested Elizabeth in reciting verses she had learned and in singing songs she had memorized at school. Of course I read stories to her every day, after her crisis was passed.

I found that I must talk a great deal as I worked. While I peeled potatoes I told Elizabeth all I had ever learned about the potato; how the little eye was cut off and planted in the soil and how the tiny plant was formed with roots going down and stem reaching up. When I beat up a simple baking of tea cakes in her room, I gave her the recipe and promised that she should make them when she was able. We planned the kind and color of frosting she liked best.

I used all the originality I had to make her trays appetizing and attractive. I selected pretty dishes, pretty napkins and pretty little colored towels. I made orange baskets; sometimes I peeled and sliced the oranges and again I quartered the orange and arranged the parts on a pretty plate. I cut her slices of toast in different shapes. Sometimes I made, with long pieces of toast, a little log cabin, which I decorated with touches of jelly.

The first playthings I gave Elizabeth were a small gold watch that was valuable only as a keepsake and two tiny pieces of white paper. Without suggestions from anybody and with no aid from scissors, Elizabeth made an attractive set of paper furniture, with which she played for several days. She tore out tiny paper dolls and seated them comfortably on the paper seats.

Every child loves to play games, so Elizabeth and I had to plan games that could be played in bed. First, I explained to my little daughter that an air castle was just an imaginary story that probably would never come true and asked her if she would like to build an air castle. She said that she would. So every day, when the restless time approached, Elizabeth and I built an air castle. One day we screened in the south end of the front porch and furnished it with comfortable porch furniture. Another day we planned a country home by a lovely stream, where we could fish and swim. Another time, we told each other just what we would buy if we had $100. Again, we related to each other dreams we had had. All of these games helped to develop Elizabeth's imagination and her ability to tell interesting stories.

Almost every day we played imaginary hide and go seek. We both shut our eyes, until one of us would announce she was hidden. Then the other one would try to guess where the hiding place was. If the guesser was approaching the place, the one who was supposed to be hiding would say "warm," and if the guesser was far away from the hiding place, the one who was supposed to be hiding would tell her she was "cold."

One dark rainy day, Elizabeth and I made up happy Mother Goose Rhymes. Some of them were:

## *Contest for Mothers Only*

ELIZABETH MARSHALL'S mother devised numerous schemes to keep Elizabeth happy and contented while she was convalescing from illness. Other mothers have faced the same problem and have also met it successfully.

For the benefit of all mothers of small bed patients, HYGEIA wants to know about these entertainment devices. For the best letter of not more than 500 words on the subject

*HOW I ENTERTAINED MY CONVALESCENT CHILD*

this magazine will give five cash prizes, as follows:

| | |
|---|---|
| First Award | $25.00 |
| Second Award | 20.00 |
| Third Award | 15.00 |
| Fourth Award | 10.00 |
| Fifth Award | 5.00 |

Letters must reach the contest editor by August 15, 1927. All letters should be addressed to: Contest Editor, HYGEIA, 535 North Dearborn Street, Chicago, Ill.

There was an old woman who lived in a shoe.
She had a lot of children
And she did know what to do.
They all helped their mother
And they minded her too;
So 'twas a happy old woman who lived in the shoe.

Georgie, Porgie, puddin' and candy,
Kissed the girls. They thought him dandy.

Old Mother Hubbard went to the cupboard,
To find her poor dog a bone,
And when she got there
She just had to stare,
For there was an ice cream cone.

Humpty Dumpty sat on the wall,
Humpty Dumpty never did fall;
For he held on with all of his might;
So that he wouldn't be dashed from sight.

Another game we played was "What is it?" Elizabeth said, "I am thinking of an animal that is white or gray. It has pink eyes and a little pink nose. It hops instead of walks. What is it, Mother?" Then, of course I guessed a time or two and, when I had the correct answer, it was my turn.

One afternoon Elizabeth and I took an advertisement that showed the pictures of many celebrated men upon its pages, and Elizabeth exclaimed, "Here is Dr. Carson!" "Here is Santa Claus!" "Here is Grandpa!" We had a great time play-finding all of our men friends.

On Sunday morning little sister, Elizabeth and I had Sunday school and several times we have had day school. Elizabeth always wants to be the teacher. We have played an arithmetic game several times. Elizabeth will say, "I am thinking of two numbers that added together make eighteen. What are they, Mother?"

I answer, "Nine and nine." Then Elizabeth will say, "That is very good. Those are the numbers I am thinking of." It is then my turn to think of two numbers.

Elizabeth has memorized some poetry since she has been in bed and has read a very little. Her school teacher has kindly interested the children in her room to write little notes to Elizabeth and to send them through the mail. The thrill of getting a real letter or two each day has given Elizabeth much entertainment and joy.

In this way, two months of the bed sentence have been served; and taking it altogether, it has been a happy two months for Elizabeth.

---

# If You Would Possess a Clear Skin

ARE beauty parlors being successful in their efforts to beautify women? Dr. William J. MacDonald, Boston skin specialist, writing in *Hospital Social Service,* thinks they are not accomplishing their purpose.

"The perpetual rushing, shoving, overeating and injudicious eating of the present day are stamping on the faces of our lovely young girls the indelible mark of ill health. Ill health is never lovely."

The very girl who seeks out the beauty parlor to help clear up her complexion is the one who belongs to that great group that looks on bodily exercise as anathema, says Dr. MacDonald. "To be perfectly frank, she is confoundedly lazy. Dean Inge recently noted that the art of walking was becoming lost. So, too, I insist, are complexions.

"If you sit all day, revel half the night, get insufficient sleep, eat without judgment, smoke incessantly and grow violently hysterical if your living quarters are not overheated, then ladies of this era, you are going to the funeral of your lost beauty at any early date. Endless visits to beauty parlors, unceasing massage, face-lifting and similar practices are going to help you in no way whatsoever."

If you would possess a clear, umblemished skin, this specialist says, keep regular hours, never be afraid to walk, avoid unsuitable foods and never overheat your homes. Constipation is a stiletto in the health of many people. It should be remedied by consulting a physician. Constipation may be due to lack of tone of the stomach and intestines, or it may be caused by some grave but easily rectified bodily derangement. Dr. MacDonald says the cold cream craze is based on a fairly insane idea that soap and water are injurious to the skin. There is no conceivably valid reason why the normal skin should not be properly washed, nay even scrubbed.

"The face should be washed twice daily," the skin specialist declares, "using considerable vigor and a mild superfatted soap. The water should be very hot. If there is a tendency toward blackheads, enlarged pores, oiliness of skin, or acne vulgaris, it is my habit to recommend Bon Ami soap, even if it is marketable for purely utilitarian and domestic purposes. It is very efficient and easily tolerated by most skins. At least five minutes should be spent in this wise, followed by lavage in cold water. The face is vigorously dried, and then, if it is desired, a cold cream may be applied."

On the whole the complexion of the average man is superior to that of the average woman, in Dr. MacDonald's opinion. He attributes this to the fact that most men shave daily using soap and hot water.

# Ivy Poisoning

## How to Escape It and Why

*Groups of three leaflets with irregular margins are characteristic of poison ivy. Clusters of greenish flowers appear in early summer.*

*By*
*Herman Goodman*

A FEW plants common in this country give certain persons an eruption of the skin. These plants are variously known as poison ivy, poison vine and poison oak. Many truths, more half truths, and still more untruths are rampant regarding what, for simplicity, we shall call poison ivy.

Some 280 families of plants are recognized as poisonous. With the majority of these we in this country have little to worry about. It is not possible by any one criterion to differentiate a poisonous from a nonpoisonous plant.

### *How to Recognize Poison Ivy*

Poison ivy, also known as trailing poison oak, is a shrub that usually climbs by means of its rootlets over rocks, walls and trees, although sometimes it is low and erect. The leaves are divided into three somewhat four sided green leaflets. The flowers are green. Underneath, the leaves are rather downy. The veins fork and end free. The stem contains a milky juice.

If the leaves come from a central point on the stem in bunches of five, yet the plant resembles poison ivy in other ways, it is probably the nonpoisonous Virginia creeper.

Another common plant with poisonous tendencies is known by a whole list of names, among them poison sumac, swamp sumac, dogwood, poison ash and poison elder. This is a small tree or shrub. The leaves come from seven to fifteen on a stem; the flowers are small and green. There is a great similarity in the flower and fruit of poison ivy and poison sumac, except for the difference in size. The stem also contains a milky juice.

People tell many stories of how poisons from plants reach the skin and cause eruptions. It is easy enough to recognize that if one handles the plant directly the poison elaborated by the plant reaches the skin and, if one is susceptible, causes the eruption.

According to one widely popular story, some people get ivy poisoning so easily that passing the place where the plant is growing will bring on an attack. Despite the mass of hearsay evidence, ivy poisoning is not borne by the air. Another story is that the smoke from a fire in which the plant is burning may cause the eruption in a person who is susceptible. From scientific experiments it is learned that it is not the smoke that carries the poison from the burning bush but the cinders that are blown on the skin of those about the camp fire.

### *How to Avoid Ivy Poisoning*

Other people say, "I don't know how I could possibly have ivy poisoning. I was so careful." Only yesterday such a statement was made. On questioning the lady, she said that she had eaten her luncheon by the roadside but had sat on a towel. It developed that later she used the same towel to dry her hands, and the poison from the plant was transferred. Once the poison has reached the hands, it is easy for it to be carried to the face. Hands and face are most markedly affected, although probably no place on the skin surface is free from the possibility of being involved in the eruption.

Probably, too, every part of the plant is irritating, so if one touches a stem or a broken off root and is not able to identify the plant from

these parts, one cannot honestly assert he has not been in contact with poison ivy.

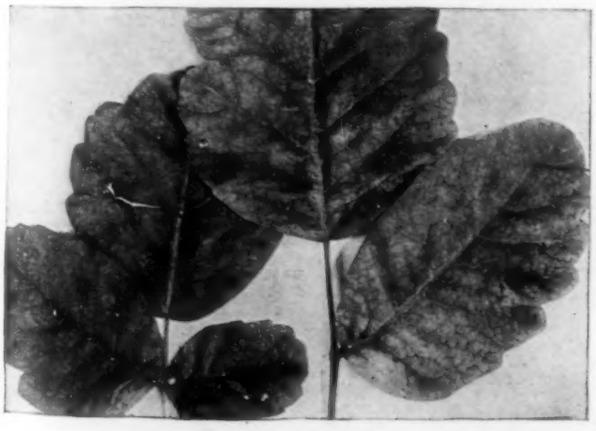
It takes from several hours to several days for a person to become aware from irritation of the skin that he has been in contact with the sap of the poison ivy. The time depends on the ease with which the individual gets ivy poisoning as well as on the amount of the sap that reaches his skin. The real poison ivy eruption comes only on those portions of the skin that have been touched with the sap either directly or indirectly. It is possible for the sap to be carried to other parts of the body, even after the eruption has begun to appear. It does not seem to be the water contents of the blisters that contain the poison, but some of the original poison still present on or very near the surface of the skin. I have been asked if ivy poisoning is communicable. The presence of poison ivy sap on clothing, a bandage or a handkerchief may cause the eruption even if the second person has not been near the plant.

Chemists have been able to identify the active principle of the poison sap and have given it the name lobinol.

Ivy poisoning is not only a skin disease. The poisoning may affect the entire body. The eyes puff, the face swells and the patient may become quite sick. The kidneys may show irritation and the stomach and the entire digestive system may not function properly as a result of this poison. Only three deaths from ivy poisoning have been reported in medical literature.

Once subject to poison ivy always subject to it seems to be a truth generally known. That a second attack may come on without contact with the plant is difficult to prove. Pimples, boils, eczema and other skin disease may follow in the wake of ivy poisoning.

Some persons believe that chewing poison ivy leaves makes one less likely to get the eruption.



*The leaf of the poison oak is more nearly oval than that of the poison ivy.*

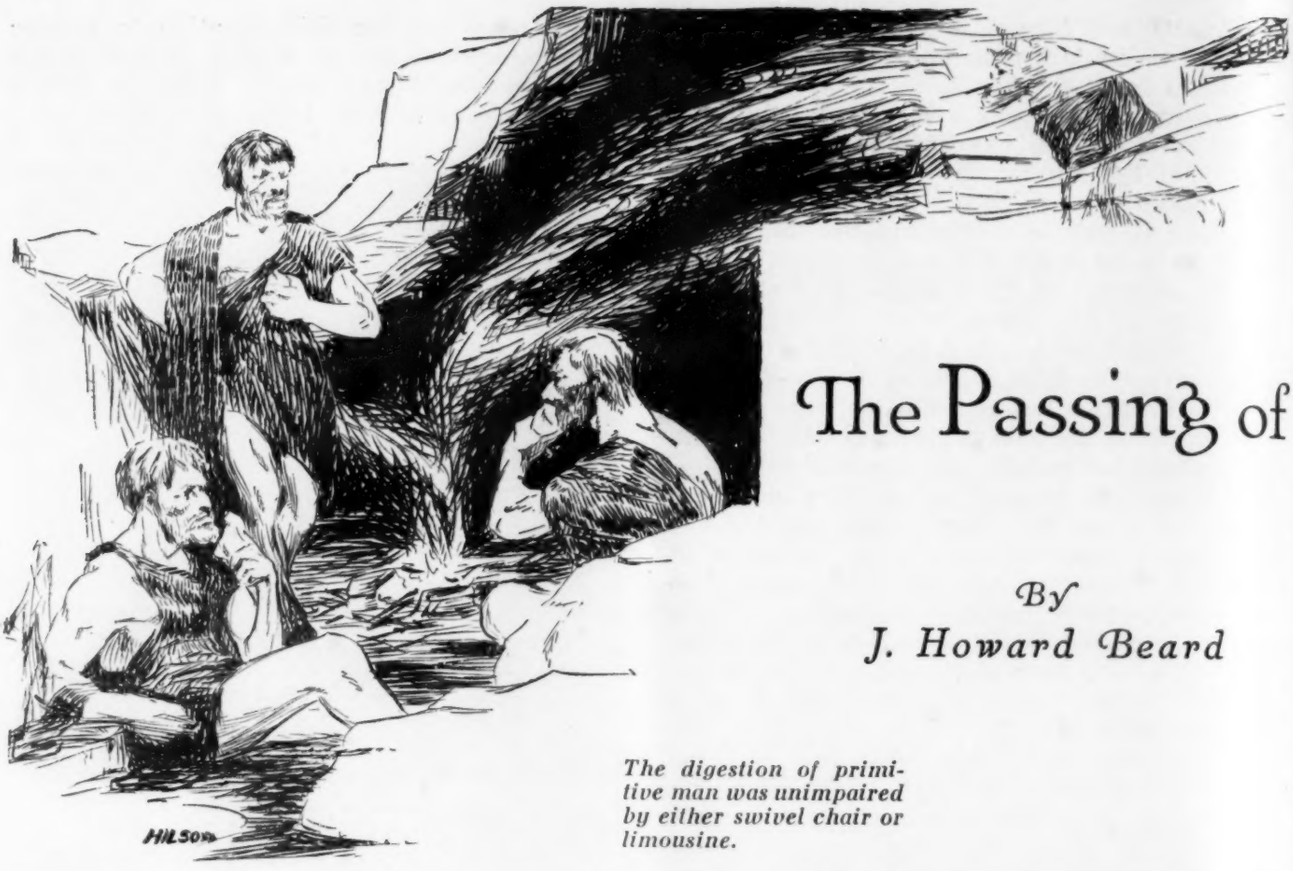
On the contrary, the sap comes in contact with the mouth surface and in a much shorter time than it takes for the skin eruption to appear after contact with poison ivy, the person begins to feel headachy and tired. If much of the poison is swallowed, he becomes very sick.

*Poison sumac is a tall tree-like shrub, with long leaves, each having from seven to thirteen leaflets on a common stem.*

Some people get ivy poisoning readily; others do not get it with the same or even a larger dose. This latter group seems to possess a natural immunity. Those who know they are likely to get ivy poisoning when exposed to the plant may be rendered immune by artificial means. A remedy has been made from the active principle of the ivy poison, and when this is injected into the person exposed it prevents the poison ivy eruption. Once the eruption appears on the skin, treatment doses of this preparation may be given by injection.

Here are a few directions on how to avoid ivy poisoning: After every trip to the larger natural parks, the country or the seashore, get into a tub of warm water, allowing the water to run continuously in and out of the tub. If there is a shower bath in the home, it may be used. Wash every part of the body quite thoroughly with a soap that lathers freely; the hair also should be washed. After the prolonged bath, rub down with alcohol, as the poison of ivy is soluble in alcohol. Rinse again with plenty of water, if desired. Change all clothing worn on the outing and have as much of it as possible thoroughly washed or boiled. Air all clothing that cannot be subjected to washing.

If the stinging and burning appear despite these prophylactic or preventive measures, go to a physician. Self treatment, drug store treatment, treatment by hearsay and folk medicine are dangerous.




*The digestion of primitive man was unimpaired by either swivel chair or limousine.*

# The Passing of

By
*J. Howard Beard*

WHEN man in the Stone Age cracked the bones of the cave bear and feasted on the raw marrow, his digestion was unimpaired by either swivel chair or limousine. His struggle for existence was acute, but he was seldom too busy to eat. He was in greater danger from the tiger than from sedentary habits and the dining table. He might become the prey of wild animals, but he did not have to be cautioned against digging his grave with his teeth.

Although man never was quite able to aline his appetite with his reason and intelligence, it has taken him 50,000 years to reach a period at which prophets and seers see in his eating a danger to health and a menace to the race. The present development of transportation, storage and food preservation in an era of prosperity have placed many Americans in the position of having greater ability to obtain food than to consume it wisely.

Primitive and modern man, though separated by thousands of years, have often been caught on different horns of the same metabolic dilemma—the former on that of malnutrition and hardship, and the latter on that of overeating and hothouse existence. Primitive man frequently faced starvation but in seeking food received the benefits of gymnasium and of golf. Modern man with an abundance of food must build country clubs and athletic fields to save himself from physical deterioration. Both have to meet the difficult problem of the reciprocal relation of food intake and physical activity, and neither can solve it hygienically except through the energy, tissue building and regulatory needs of the body.

Through centuries of modification and extension, the rudimentary practices of the cave man in the selection, preparation, serving and eating of food gradually attained the refinement of a delightful art. A few decades ago, cooks were extolled as more precious than music, poetry and art, of more value even than conscience or heart. The philosopher observed that man seldom thought of anything with more earnestness than he did of his dinner. The capitalist found it the very lubrication of business. Southern hospitality made it the *pièce de résistance* of social intercourse and the poet discovered in the dinner bell "the tocsin of the soul."

Eating combined not only pleasure with routine bodily nourishment, but it included wise choice of food, finesse in its preparation, attractiveness of serving, and creation of an atmosphere psychologically correct to stimulate functions essential to normal digestion.

### *Dining Becomes High Powered*

A new era dawns. With astounding rapidity, discovery follows discovery in the mechanical arts. Industrialism is born. The center of the population shifts from the country to the city. A machine-set pace is introduced into manufacturing. The Strenuous Age has arrived. Eating no longer appeals to the imagination; it

# Eating as a Delightful Art

*The lunch counter makes it possible to put the maximum amount of food in the stomach in the minimum amount of time.*

becomes a necessary time-consuming evil to be sacrificed for convenience by being sandwiched between business appointments or by being taken care of at the next stop.

Cookery, once the theme of poets, is made the tool of the salesman, who crowds monetary values on a cafeteria tray in accordance with the approved principles of business psychology. Eating is high geared to save time. The human furnace is no longer supplied merely with fuel sufficient to meet the needs of the body, but it is stoked to red hotness all the time. The human machine responds to the wear and tear of eating too much, too often and too fast by a predisposition to arteriosclerosis, gout, overweight, diabetes, asthenia, inertia and short life.

### *Eating with an Urge*

If a citizen of the twentieth century should accept moderation as a sound physiologic principle and should exercise and not overeat, his high resolve scarcely would be formed before he would have to endure an "eat more" drive, conducted with an intensity of propaganda exceeded only by bond selling in war time. He would be told of so many alleged reasons for eating more and so many dangers of eating less of this or that foodstuff that he would be fortunate if he became neither a faddist nor a glutton.

He would be urged to eat more raisins to get iron, but he would not be told that he might also get intestinal irritation from too much sugar and too many skins. He would discover that even so excellent a food as milk may be overdone, particularly when not tolerated. He would therefore revolt not only against more milk but against all milk. More vegetables is an ideal shibboleth for a sedentary age, but in certain cases their high cellulose content, volume and nonstimulating properties make them undesirable.

Attractive posters advise more meat but a number of persons may not take it without throwing an excessive strain on the organs of elimination, particularly the kidneys. Without special consideration of individual needs, "more food" may become the slogan of obesity and tissue degeneration rather than that of proper nutrition.

Hot dog stands, cafeterias and even some hotels in methods of service sacrifice an atmosphere conducive to digestion to standardization, speed and high pressure salesmanship. Again does the genius of America wave its magic wand above the lunch counter making it possible to put the maximum amount of food in the stomach in a minimum of time. Thus is modern man made safe for indigestion.

### *Encumbrances of Eating*

Modern eating is frequently more embarrassed by impedimenta than was the army of Caesar in his transalpine campaigns. From being too fast to be healthful, it often becomes

too conventional to be physiologic. The psychologic stimulus to digestion produced by the sight of a delightful dinner is weakened materially when the meal is served in a series of long-drawn-out courses instead of as a whole. A part of a meal, even when the rest of it is anticipated through a beautiful menu card, does not cause the flow of gastric juice produced by the sight of an artistically set table filled with well prepared food, whose incense rises to the ceiling.

The necessity of being trained to select from an array of silver and chinaware the special piece to do the particular task assigned it by the latest whim of an exclusive caterer is not in the interest of digestion. If the diner becomes uncertain as to procedure and has to remain alert so as to permit some one else to assume the initiative while he attempts to imitate without displaying ignorance, he suffers from a state of mind unconducive to digestion.

### *Table Is No Place for Launching Drives*

With frequent changes in the practice of caterers and with so many opportunities to make *faux pas*, it is not surprising that a hypersensitive or socially aspiring person develops an anxiety complex, which produces a psychologic state unfavorable to digestion. Under such circumstances the subtle influence on appetite and digestion of spotless table linen, attractive food and beauty of dining hall are lost in the mental concentration necessary to avoid using the wrong fork or spoon.

With a few exceptions, the benefits to nutrition to be derived from a pleasing environment tend to be in inverse proportion to its complexity. The effect of repose, freedom from nerve tension and cheerfulness so essential to good digestion are more frequently to be found in simple, clean, quiet, attractive surroundings than in those characterized by formality, superfluousness and noise.

By wise selection and timely staging, music and vaudeville may provide entertaining and even wholesome recreation at meal time. However, the din of jazz and the wail of the mediocre cabaret singer to the accompaniment of the rattling and crashing of dishes deprives digestion of the advantages of calm.

Whether at a railroad crossing or at the dining table, the average American is unable to contend successfully with the impetuosity of his hurry or the mania to save time. Accordingly he converts his meal time into a zero hour for launching drives or makes the last course of his luncheon a forum.

Dinner engagements for the transaction of business are becoming more and more common. They rush the busy man to his meals under high tension, with plans on his mind and business at his finger tips. The making of the meal hour a time for the beginning of an enterprise or for the consummation of a deal is not only a handicap to digestion but is psychologically incorrect, because perception is dulled and thought is retarded.

### *The Tragedy of Speed*

Some Americans have acquired such nerve tension that if they were required to take a short rest before eating and were compelled to assume a calm, cheerful attitude before taking a meal the repression apparent to them would be almost as conducive to indigestion as their undue haste. They are machines of great velocity and large output but are early destined to the repair shop and scrap heap. As a result of their pace, they fall into the triple evil of eating too fast, of eating too much and of bolting their food.

The benefits to digestion to be derived from the disintegration of the food and its admixture with the saliva through mastication are sacrificed to speed. The effectiveness of ptyalin is reduced because of the shorter period allowed for its action in the mouth and the quicker transfer of the food in larger morsels into the acid environment of the stomach.

Conditions and surroundings that are free from rush and hurry will promote better chewing of the food and its retention in the mouth until it has been liquefied sufficiently to be swallowed without being washed down by liquids. To eat leisurely is to eat less. Cheerful conversation tends to reduce the amount of food eaten.

The fast eater is likely to be a large eater, frequently an overeater with a large stomach. He finds it difficult to eat less than usual because he has fallen into the practice of gaging his food demands by his sensation of fulness rather than by his bodily needs or by his appetite.

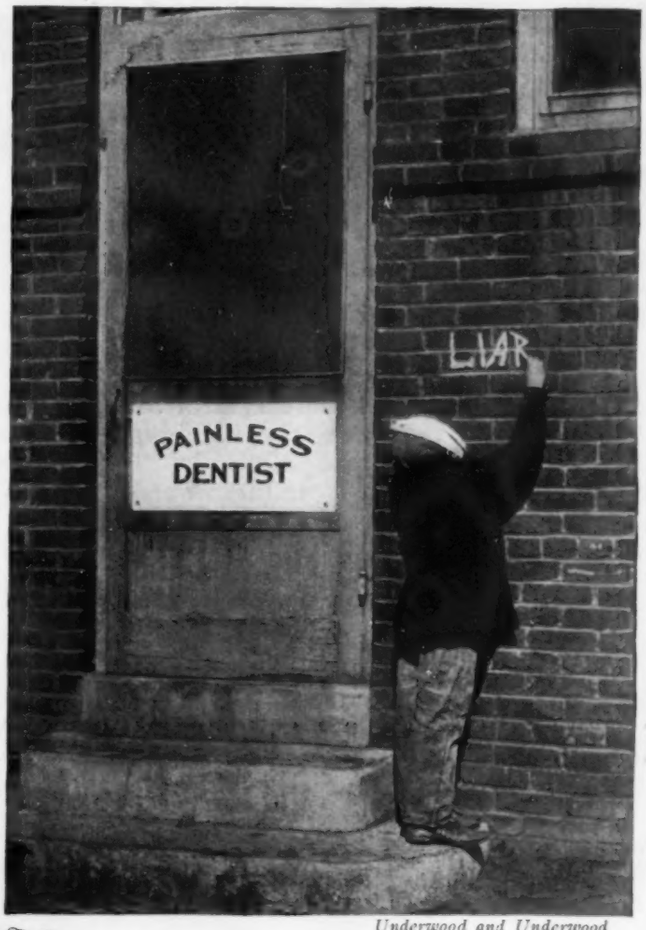
### *Eating Forget-Me-Nots*

If eating is to retain its sanity and its art in this strenuous but scientific age, food must be selected wisely, bought economically, prepared tastefully and served attractively. It must discard its present subconscious ideal of a sandwich in one hand, a cup of coffee in the other, and an eye on the clock. In filling a cafeteria tray it must not permit the subtle methods of salesmanship to serve profits rather than nutrition. It must eject worry and business from the dining hall and bring to the table relaxation, pleasure and charm.

Eating must be surrounded by such an atmosphere as the great master diner, Colonel Carter of Cartersville, insisted on when he cautioned his guest to, "Salt yo' food, suh, with humor. Season it with wit, and sprinkle it all over with the charm of good fellowship, but never poison it with the cares of yo' life. It is an insult to your digestion, besides bein', suh, a mark of bad breedin'."

# False Dentists *and* False Teeth

*By* Louis G. De Armand




*Underwood and Underwood*

ONLY when the public comes to take seriously such basic facts as the following will the advertising quack of dentistry go the way of the once popular booze-ladened "patent medicines" and their manufacturers.

There never has been a piece of dental work that could be guaranteed.

There is only one way to save money on dental work and that is by visiting a good

dentist often and by relying on his judgment. Turnover and bulk sales may be worthy objectives in large business enterprises, but they are not applicable to dentistry.

The dentist who deals fairly by his patient is worth his hire, whatever that may total in money.

True dentists are seldom salesmen. The false dentist is always a salesman.

Now, lest the reader assumes that all dentists who advertise are fakes, let us briefly analyze dental advertising. All dentists use cards and signs and appreciate the word of mouth advertising of satisfied patients. Some dentists go so far as to mail out booklets of an educational nature. None of these dentists advertise prices, publish testimonials or follow the style of "patent medicine" advertising.

I once had experience in one of the largest advertising dental offices in the Middle West, where the policy was to get all the patient would give. Speed was demanded of all dentists employed, for it was a highly organized office and the owners had to get the money to keep the place going.

It was on the recommendation of a dental colleague, my fraternity brother, that I applied for work at this large office. I wanted a place as an assistant in a dentist's office, but with only a year of actual work to my credit since receiving my diploma, the dentist to whom I applied looked upon me as not yet qualified. I took his advice and got a job in an advertising office employing six dentists as operators and from four to eight laboratory men.

This office was advertised as a dental college. The system was ideal for such an office. A hard-boiled but beautifully suave creature sat at the door of the reception room. She listed each patient and gave him a card. The come-on, "anesthetic expert" salesman had an office directly behind the little lady. At a signal from this office each victim was sent in. If any one imagines that J. Rufus Wallingford was a wholly fictitious character he has never listened

to the salesman in such an office. That man, after what appeared to be a searching examination of the mouth, could make the patient believe that all the troubles of the past, all the images of the future, all the disturbances of the present were directly traceable to the condition of his teeth. Alone in a dental chair in that room the patient had no more chance of getting out without leaving some money with the fair charmer outside than I have of getting a third set of teeth.

But let us examine the technical methods of these great saviors of the teeth of the gullible. If a patient had a cavity in any tooth that tooth must be treated. Treatments cost 50 cents each. I treated the teeth of one patient every other day for three months. That patient paid $8.50 in to the "college" before he demanded that something be done for him. Then he was sold on the idea of having a special gold crown at $8; but the crown by that time had really cost him $16.50. At that time my fraternity brother would have made a true and worth-while crown for $12.

As a dental surgeon who had been studying in Mexico and other foreign countries, I was once called in on consultation to pass upon a set of teeth made for a railroad engineer. The man had come to the office eighteen months before. At that time he paid $2 to have two teeth extracted and $15 for a rubber plate. During the eighteen months, as each plate began to give him trouble, he was sold something a little better. He had now reached a point at which consultation was necessary. I said the plate he had was not one he could wear. I said it did not fit and that he would have to have a new one. These statements were true. But I did not tell him that the plate was at fault because I was not permitted to volunteer information. The engineer was finally induced to have a special "——— College" gold plate made. This made his total bill for a plate that would fit over $350, I learned afterward.

### *Bargain Days for False Teeth*

On certain days each month the office would advertise in large newspaper display: "A Full Set of Hard Rubber Teeth for Only $10." These offers were good for a few days only. They always brought many patients. When the patients came the damsel in front would ask them if they wanted the special teeth advertised. If they did they were shown a basket in which were fifty or more old sets of teeth. "There are the $10 teeth; just pick out a set that will fit." Of course this failed to bring forth any ten spots.

Then the salesman would approach the half dozen patients about the basket and, with his modulated, soothing-syrup manner, would soften the blow. With a great show of authority, he would demand of the office girl just what she meant by telling these people to pick out teeth in this manner. Invariably the patients began to wilt and soon, one by one, they were seen to go into the "anesthetic" room.

Many of the old advertising dentists of other days, and some who are still active and prosperous, were side-show dentists; that is, they advertised by giving free exhibitions on the streets.

One such quack dentist in a far western city (he now conducts a string of offices) nearly killed my brother-in-law. It was years ago and he was only a boy. He had been suffering intense pain all day from a cantankerous molar. In the evening he was sent downtown to have the tooth extracted.

On his way to the office he stopped to hear the spiel of the street dentist. Two colored banjo and guitar "artists" were playing and singing ragtime. A large crowd had gathered about the carriage. Soon the dentist in high hat and long black coat began his talk. He bewailed the fact that people were made to suffer because of so simple an operation as having a tooth pulled. He drew terrible word pictures of the methods of regular dentists, and then, reaching for the bright, cheerful colors, he painted a pleasing picture of his system of painless extractions.

### *Side Show Dentistry*

During the excitement following this lurid spiel my future brother-in-law worked his way to the front and finally he was in the carriage. The street dentist took a hypodermic needle and injected something about the aching molar. He talked a few moments, then motioned to the musicians to start up. The negro shouters filled the air with their blatant song, pandemonium reigned for a few moments and then the boy heard the dentist say: "There, my good fellow, it didn't hurt a bit, did it?" He remembers shaking his head to indicate that it did not.

The following day a surgeon and two real dentists worked for hours trying to save the boy's life.

I know several dentists who would be classed as advertising dentists, and quite rightly, and yet they are efficient in their profession. But for every one who is honest, qualified to serve efficiently, and worthy of confidence, there are fifty who "guarantee," quote prices, and adopt department store advertising methods to get the patient in so that he may be mulcted of his hard-earned money.

The safest dentist to visit is one who may be obscure, in the shadow rather than in the limelight, but who is friendly, warm, sympathetic and honest. Such a dentist is a true painless dentist. Neither his methods nor his teeth are false.

# Paddle Your Own Canoe

*An exciting tilting contest on the waters of the peaceful Potomac.*

By George H. Dacy

ONE OF the most restful melodies of the great outdoors is the rhythmic swish of the canoeist's paddle as he propels his craft along some secluded stream. The flash of broad blade, the extension and contraction of strong arms, deep intakes of fresh air, the regular swing of the torso and the beneficial exercise of abdominal muscles—these are healthful attributes of canoeing, a recreation that can be as conservative as quoits or as violent as wrestling.

If there is anything more restful than to loll back among the cushions of a canoe and to drift with the current through previously unexplored waterways, I should like to form a friendship with it. Recreation and complete relaxation are the deities of pleasure canoeing.

Canoeing is a water sport that tones both mind and muscles. It can be enjoyed in sunlight or moonlight. No picture ever painted can outrival the view from a drifting canoe as the moon lifts its glowing countenance above the waterbound horizon. Sunrise or sunset seen from a craft of canvas or birch bark is every bit as wonderful.

The multiplicity of lakes, rivers and canals that speckle the American map provide ideal conditions for canoeing. The sport is one that is within the reach of the public, for canoes may usually be rented at a nominal rate per hour. Most devotees of the sport prefer to own their canoes. The leading makes and models have been standardized in length, beam and weight.

No city in the United States provides more satisfactory conditions for canoeing than our national capital, where the sport has long been popular. That broad and historical waterway, the Potomac River, provides excellent canoeing on calm days. The Chesapeake and Ohio canal, extending from Washington to Cumberland, Md., a distance of 186 miles, provides perfect conditions for canoeing in all kinds of weather. This canal was planned and partly surveyed by George Washington, who sought to develop it as an easy means of communication with the fertile Ohio valley.

Our beautiful city of presidents boasts one of the world's preeminent water sports organizations, the Washington Canoe Club, which during the last ten years has participated in forty regattas and has won more than 250 championship races and contests. At the Olympic games in 1924, the paddlers from the national

capital captured the lion's share of the honors. Canadian paddlers were their keenest opponents.

The Washington Canoe Club has 300 members including government clerks, army and navy officers, congressmen and senators, and representatives of practically every university and college in the country. The club maintains a fleet of 225 racing and pleasure canoes. Its commodious clubhouse is located only ten minutes' ride from the U. S. Treasury. The clubhouse is built on a strip of land that separates the Potomac River from the Chesapeake and Ohio canal.

Washington's leading canoe club—there are three other organizations that also foster water sports—has long been a patron of canoe racing in the East, but its primary purpose has been

From the days of Washington to Coolidge, the Potomac has been the pleasure grounds of American statesmen. Once John Adams went for a swim when he lacked a bathing suit. He hung his clothes on a sycamore tree and plunged into the Potomac. When the statesman, tired of swimming, returned to the bank, he found the tree but not the clothes.

About that time the rumble of wheels on the neighboring highway caused Adams to plunge again into the Potomac. Standing in the water with only his head above the surface, the Hon. Mr. Adams called to the occupants of the carriage for aid. The vehicle came to a sudden halt. A lady thrust her head from the window. She happened to be a society matron of Mr. Adams' acquaintance. After laughing heartily at his predicament, she promised to send her

*The champion single blade four of the Washington Canoe Club.*

to interest the 500,000 residents of the city in canoeing as a healthful amusement. The maximum use of the river and canal during the spring, summer and fall months demonstrates that this campaign has been successful. There are more people interested in inland water sports per thousand of population in Washington than in any other city in the United States.

George Washington was the first statesman of prominence to cruise the Potomac in either rowboat or canoe. During his early explorative trips of the river, which he called one of the most beautiful in the United States, Washington used an Indian canoe made of durable bark. The use of the canoe was confined to the lower Potomac as the upper Potomac, northwest of the city of Washington, is made dangerous by sharp-pointed rocks concealed just below the surface.

coachman with blankets and a carriage to rescue him. One hour later a chilled and chagrined statesman wrapped like an Indian chieftain reached home. That was the last swim, so history relates, that John Adams took while in Washington.

In the early days, sport-loving members of Congress sometimes spent part of their summer vacations in canoe trips down the Potomac. These cruises extended as far south as Piney Point, Cape Lookout and the entrance to Chesapeake Bay. The exercise gained in plying spruce paddles a dozen hours a day and the freedom from legislative worries restored the vigor of exhausted lawmakers and put them in fine fettle for the subsequent session.

The ideal of the most daring canoeists is to run the rapids of the upper Potomac. During the last twenty years, hundreds have attempted this feat but none have succeeded. In some

cases, the boatmen have negotiated all the rapids and boiling swirls except those of Little Falls, about 6 miles from the White House.

A dozen members of the Washington Canoe Club have been making a scientific study of the currents, barriers and possible passages through these rock-lined waters. They have tossed logs into the seething waters and then by the aid of powerful field glasses have studied their topsyturvy progress through the whirlpools. They have photographed the rapids from every possible angle, have made enlargements of the best pictures and have studied them carefully under a magnification of 1,200 diameters. But none has yet conquered the rapids. Some day one of them may make the thrilling trip without a spill.

*The double blade four of the Washington Canoe Club has not lost a race in six years, since mastering the Knight system of stroke.*

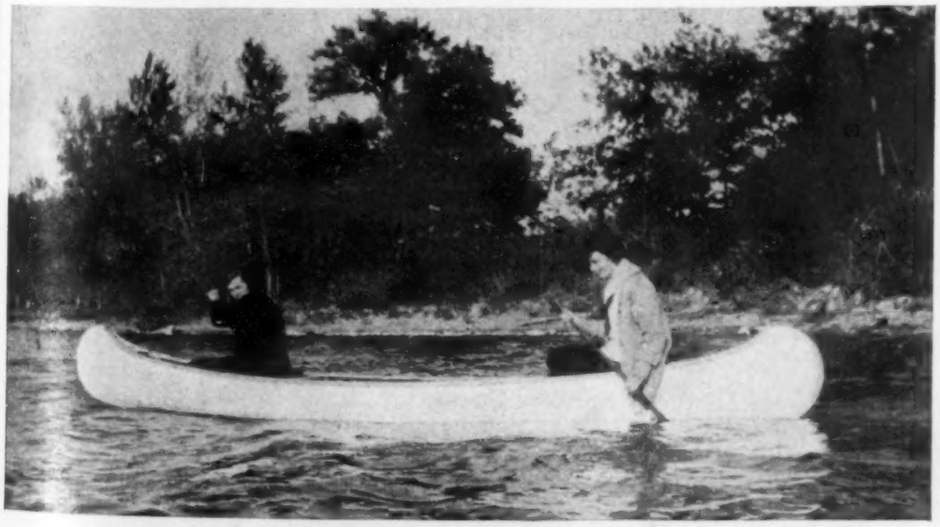
The American Canoe Association, which includes all the prominent canoe clubs in this country, maintains a special camp at Sugar Island, Canada. It is the headquarters of American canoe camping parties during the summer. A special two weeks' camp in August is the banner gathering of the year. Representatives of all the American clubs assemble at that time for canoe events and water sports. Canada always sends her best paddlers to compete against the United States.

Canoeing trips over Maine lakes and rivers have been popular vacation pastimes ever since Americans began to participate in outdoor athletics. By portaging supplies and canoes from one body of water to another, the excursion may last indefinitely, for Maine like Florida is rich in inland waterways.

The canoeing party that plans a trip in Maine during warm weather must be sure to prepare for mosquitoes. These insects of the Maine wilderness are not soon forgotten. Many vacation trips are dismal failures because campers and boatmen prepare for everything but mosquitoes.

The lakes of Michigan, Wisconsin and Minnesota connected in chains by tributary streams also offer matchless itineraries for canoe trips. Newcomers have to hire experienced guides to accompany them or else they soon lose their way.

A canoe trip that lures several parties of paddlers every summer but that requires too much time for the average enthusiast to attempt is the river jaunt from northern Minnesota to southern Mississippi. Our Father of Waters with its swift current makes the trip an easy but long journey. It is an educational tour as well as a delightful river trip, for the Mississippi winds its way through some of the finest farming country in the world. One can gain some idea of how crooked the Mississippi is by the fact that in traveling a certain 40 mile stretch of its course south of St. Louis the canoe will be headed in every direction twice. For a conservative sport, canoeing fills the bill.



*The lakes of Michigan, Wisconsin and Minnesota offer matchless itineraries for canoe trips.*

# Hysteria

## *Is neither Faking nor Foolishness but Real Disease*

*By Karl Menninger*

I

A high school girl was brought to the mental hygiene clinic with a useless leg. The parents related that for two years she had been unable to stand on it or use it in any way while she was erect; they had to carry her everywhere. Lying upon the bed or couch, she was able to move it normally. Neurologic examination showed the nerves to be uninjured.

II

A soldier in the trenches was stunned by the explosion of a large shell. He "came to" almost immediately but felt that something had happened to him. He was at first unable to move any part of his body; soon he found that he was twitching and jerking all over. His tremors continued after he had been removed to the base hospital. He appeared to be in a terrible fright but said that he felt no fear. Neurologic tests showed that he had lost all feeling for even so sharp a stimulus as a needle thrust deeply into the skin.

*It began in the trenches.*

III

A school child of 9 suddenly began to scream and hold her hand to her head. Relatives flocked about her; doctors were called; all sorts of relief measures were tried in vain. The screams finally changed into prolonged wailings and loud crying. Suddenly it all ceased, the child arose and went about her play as if nothing had happened.

IV

A woman of 40 lies on a specially made springless bed, maintaining as nearly as possible a motionless position. She is carefully fed and nursed by her solicitous farmer husband, who comes in from his work many times a day to attend to her needs. She talks glibly and volubly of her "terrible condition," and recites in detail how five years previously she permitted herself to make a slight move in the bed that resulted in a sudden and terrible pain in the head, blackness and feeling of imminent destruction. Since then she has not ventured to repeat this rash act.

This patient was hypnotized, and in this state she arose from the bed in which she had not moved for five years, went to the supper table and ate with her family. For a few weeks she repeated this even when not in the hypnotic state. Then she relapsed into the old conviction of helpless immobility. Five years more have passed; she is still lying motionless, fed and tended by her faithful husband.

V

Neighbors and relatives clustered about the bed of a woman who appeared to be dying. She gasped and struggled for breath; she writhed and groaned; from time to time she threw herself into the air and screamed and jerked her body convulsively. The family physician suggested a consultation. The consultant arrived, examined the patient, conferred with the family physician aloud in the patient's presence, assuring him that she would recover both mentally and physically. The next morning the patient was well.

VI

A young man was working on his uncle's farm in Ohio. He started to the house on Saturday afternoon to lay off until Monday morning. He recalls no more until he found himself in bed in a hotel in California. Upon investigating he found that three weeks had elapsed. The card of a traveling man in his pocket gave him a clue. He wrote to the man and received an incredulous reply, saying that when he had exchanged cards he had appeared to be a perfectly normal young man going about his business in a matter-of-fact and self-confident way, giving such and such a name, destination and program.

VII

A business man arranged a surprise party for his parents and invited all the relatives. Many came and "a good time was enjoyed by all"—all except the instigator. He felt overpowered by sleep and slept for several days. Then he began to have normal days, but queer nights in which he talked and acted as if he were living through his boyhood days again. He played, sang, talked, laughed and carried on precisely as if he were 8 or 10 years old. His relatives remained up all night to observe him. When daybreak came he went about his work as usual and insisted that he had slept all night.

*The host went to sleep.*

ALL the foregoing cases are examples of the disease known as hysteria. Hysteria is a form of mental sickness; it is what is called popularly a nervous disease. But of course the disease isn't nervous and often the patient isn't nervous either, in the ordinary sense of the word. Nor has hysteria anything to do with the nerves of the body. It is a disease that may (and usually does) occur in persons of sound physical health, whose brain, spinal cord and nerves are free from injury, defect or disease.

*In bed for ten years.*

Hysteria is the name of a type of disability chiefly or entirely psychogenic (psych = mind, genic = produced by) in origin; i. e., the chief factors producing the symptoms of hysteria are psychologic. In diabetes, by contrast, the symptoms are produced chemically; in obstruction of the bowels, the symptoms are produced mechanically; in hysteria, the symptoms are produced psychologically. Physical and chemical causative factors are at a minimum; it is a matter of misfunctioning perceptions, emotions and associations. The governing machinery of the organism does a flop.

### *Symptoms*

The symptoms of hysteria are legion. They are more numerous and varied than those of any other known disease and may almost indistinguishably mock many diseases.

Some idea of the wide variety of symptoms may be gleaned from a perusal of the case outlines cited at the beginning of the article. All sorts of affections of all the general and special senses, simple and complex alterations in the motor functionings of the body, divers affections of the various organs of the body and of the ordinary functions of those organs, multitudinous perversions of feeling and behavior—all these and many others in an infinite variety of combinations make up the pictures of hysteria.

The most frequent pictures are simple paralyses, i. e., a useless arm or leg such as one sees in infantile paralysis; losses of sensation in a part of the body; loss of speech or of hearing; inexplicable and incessant vomiting; losses of consciousness. But these symptoms are almost never single; there are always many other indications of the mental splitting.

Why does the hysterical patient have these symptoms and what is the meaning of them? For a long time they were regarded, even by the physicians who studied them most intently, as being inexplicably meaningless. It is not strange, therefore, that by the scientifically untrained and untutored, hysterical patients were once regarded as bewitched. Thereafter there developed the theory that the symptoms were haphazard and senseless indications of disordered brain function. But this theory had to be abandoned, for it was not difficult to show that the brain was never affected in hysteria. Next there came the hard-boiled-sergeant explanation, still held by many who refuse to be enlightened. This is the theory that hysteria is "all put on," that it is a conscious and deliberate fraud on the part of the subject and that the best treatment is mistreatment of some sort—punishment, torture or threatening.

Meantime scientists were ascertaining more definitely something of the laws of mental functioning and were beginning to realize that, whether obvious or not, all symptoms have causes and purposes. They discovered these facts about hysteria and about the other neuroses: that the symptoms sometimes appeared as the result of suggestion, that this suggestion might be direct or indirect and mediate or immediate; that the symptoms could frequently be entirely removed by suggestion.

*He woke up in California.*

It had long been noticed, of course, that the symptoms of the hysterical patient often stood him in good stead in some ulterior way; a soldier with hysterical shell shock was no longer obliged to endanger his life or exhaust his muscles; a boy with an hysterical paralysis is naturally excused from compulsory school attendance, and a girl whose hysterical symptoms are of just the right sort can attract far more attention than her much prettier but more stable sister. Thus the hysterical patient seemed to use his disease as a means of escaping from an unpleasant or undesirable reality.

But only the very naive or the very hard-boiled believed that the hysterical patient was a conscious and deliberate fake. It seemed certain that many of these cases, even those whose advantage gained from the illness was most obvious, were unaware of the mechanism of its production. The symptoms might indeed be faked, but the faking was unconsciously done.

This led to further studies of the unconscious mind, and it was in this connection that the work of Freud with respect to the origins of mental disease began. Freud and a less known worker, Breuer, discovered that some of these patients seemed to have developed their symptoms as a protective or defensive system as the result of an emotional shock, a terrible experience of some sort.

Further study led Freud to believe that this shock was really the whole series of shocks that are sustained by all of us in adapting our primitive infantile minds to the complex outer world that meets the growing child. Most of these shocks, he believes, are associated with our efforts to adapt our instinctive cravings to the permitted social indulgences, i. e., the proper direction of our love life in the broad sense of the word love. For Freud, then, the advantages seemingly gained by the hysterical patient through the aid of his symptoms are secondary rather than primary and confirm rather than cause the illness.

The symptoms of hysteria are the crystallized forms of unrealized, unfaced mental experiences or desires that have escaped from repression in this unreal and unprofitable way. They escape because the control is poor and because it has been overwhelmed by an increase in pressure from increased difficulties in adaptation to reality. The escape and dramatization of these previously repressed fragments also achieve the immunity of the individual from the necessity of further struggles.

The theories of cause may be summarized by saying that in certain individuals, perhaps predisposed by heredity to mental instability, and trained to inexpedient mental habits by well-intentioned but unskilful parents, certain symptoms are provoked by the accumulation of internal and external stresses in adaptation efforts. These symptoms not only permit the patient a certain escape from the painful realities ahead of him or about him, but gratify directly or indirectly certain unconscious cravings. The particular form of the symptoms is chiefly determined by the nature of these cravings, but is capable of considerable modification by suggestion.

### *Treatment*

What can be done for the patient with hysteria?

The first thing to be done is to make sure that the disease suspected of being hysteria in a given case is actually hysteria.

The next problem is to attempt to grasp the real significance of the illness to the patient, to seek out the various causative factors and to evaluate the symptoms with reference to the patient and his past. Only then can the proper treatment be determined on. Selection of the type of treatment most likely to prove effectual in a given case is only possible on the basis of such investigation and in the light of much clinical experience. One case is best treated by hypnosis, another by suggestion of a less spectacular type, another by an intellectual attack on the disease—the so-called reeducation. Some cases respond to "studied neglect," others to hospitalization and the establishing of an ordered routine.

Most logical of all are the various methods that attempt to get at and remove the psychologic causes. This may be done from within or from without. The former is the objective of orthodox psychoanalysis; the latter is the technic utilizing psychiatric social work. Both are important. Some cases respond best to analytic efforts to make the patient seek, see and rid himself of the painful repressed memories that determine his wrong attitudes, to discover and renounce the real causes and secret gratifications of his illness. Many others, especially children, are best treated by treating the environment.

The treatment of hysteria is usually successful, provided that it is at all intelligent. Sometimes even stupid treatment appears to succeed, but the aftermath is likely to be malignant. An hysterical school girl was "cured" by her exasperated father with a fearful beating; the hysterical symptoms disappeared but it is likely that, having sown the wind, this father will reap the whirlwind. It is dangerous to conclude that the end justifies the means, or that the cure of a case of hysteria by affording a certain gratification proves the cause to have been that lack.

### *Sometimes Cured by Calamity*

Some cases of hysteria are cured by the appearance of serious physical disease or financial or social calamity. Thus hysteria may appear to be caused by trouble or cured by trouble; in both instances, however, one is dealing only with appearances and better acquaintance with the infinite details of the emotional experiences of the individual, together with deeper study of the laws of psychologic functioning, convince one of the impossibility of making simple formulas to explain so complex a picture as hysteria.

For the general public it is important to understand that hysteria is an evidence of a failure in mental adaptation, the result of many complex factors, most of which are unknown both to the patient and to the outside world, and that these causative factors may be discovered and utilized in curing the victim with the aid of the proper medical skill. Under no circumstances is one justified in regarding hysteria as faking or foolishness. Most of such cases are curable, but, neglected, the disease may cripple its victim until death ends the struggle.

VIII. Compulsions

# The Nervous Child

*By*
*Frank Howard Richardson*

THE delightful little philosophy of A. A. Milne's Christopher Robin may have evolved out of his little gold head; or it may have been that a nursery maid or governess implanted the familiar conception therein, for purposes of play or for some ulterior motive of her own. Frequently, to be sure, such compulsive ideas have no more fear-inspiring or crippling effect on the little minds that harbor them than Christopher Robin shows in these delightful lines.

### Lines and Squares

Whenever I walk in a London street,
I'm ever so careful to watch my feet;
And I keep in the squares,
And the masses of bears
Who wait at the corners all ready to eat
The sillies who tread on the lines of the street
Go back to their lairs,
And I say to them, "Bears,
Just look how I'm walking on all of the squares!"
And the little bears growl to each other, "He's mine,
As soon as he's silly and steps on a line."
And some of the bigger bears try to pretend
That they came round the corner to look for a friend;
And they try to pretend that nobody cares
Whether you walk on the lines or the squares.
But only the sillies believe their talk;
It's ever so 'portant how you walk.
And it's ever so jolly to call out, "Bears,
Just watch me walking in all the squares!"

*—A. A. Milne in "When We Were Very Young."*

Such supposedly harmless ideas carried a shade too far may readily develop into compulsions, or impulsions, that occur in nervous children. They give rise to all manner of difficulties until or unless they can be eradicated.

Sometimes it is the lines of the street that are tabu, and sometimes it is the squares. Whichever it happens to be, a misstep must be expiated by the little devotee's returning to the scene of his error to correct it, on pain of suffering from an intolerable sensation of unrelieved tension. The corrective act alone can resolve this feeling of tension.

### *Must Do Everything Three Times*

Sometimes a compulsion is of an arithmetical variety. For instance, everything may have to be done three times before it is considered finished. If a glass is picked up and set down, it cannot be left alone until the act has been twice repeated. Then and only then can the sufferer go on to the next duty. Sometimes the form taken is that of a compulsory reading of every word seen on a billboard or in a street car sign card; if one or more words are slighted, it becomes necessary for him to go back and remedy the omission, before the child can forget the trivial occurrence.

Still another variety is the compulsion that concerns itself with the repetition of some daily ritual, like washing the hands and face a certain way or brushing the teeth a given number of times. A daily prayer may have to be repeated with absolute precision, and the fear lest a mistake has been made may compel its reiteration many times before the petitioner is satisfied that perfection has been reached.

### *Painfully Truthful*

Somewhat similar in derivation is the overstressed insistence on meticulous exactness and absolute truthfulness. This sometimes takes the form of vain repetitions of unimportant statements or remarks, in an agonized effort to make them absolutely free from error. In this semireligious meticulousness, there may sometimes be traced a tinge of the phobia, especially when there is evident a certain fear of the dire effects of a wrongly uttered prayer or of a possible minute departure from strict truthfulness. In such cases, the phobia element takes the form of a fear of punishment by an angry God and is inextricably entangled with the compul-

sion motive. This sort of thing is prone to develop in children brought up in an unwisely devotional or unduly emotional milieu. The minister's family not infrequently is the setting for some such compulsion.

It may be difficult or impossible to run down compulsions to their sources more specifically than to make the blanket diagnosis of nervousness. Sometimes, of course, they may be traced to definite harmful incidents known to have occurred; or, quite as likely, they seem to crop up out of a fertile soil, like weeds out of tilled earth, without apparent sowing of seed. Many of them may be traced to the old wives' tales of superstitious adults. With the innate duplicity of youth (or so it seems to us purblind adults) they may be successfully concealed for a long time. In fact, many of them are never discovered during the term of their activity, but remain to be recalled in later life as incidents of a childhood that is long past. At such a remote date, it may be possible to uncover and identify their causes, but often the causes remain undetected forever.

### *Parents Should Be on Lookout*

We who are parents or are concerned in any other way with the care of children should be constantly on the lookout for signs of compulsive thoughts or ideas.

Otherwise, they may grow to the proportions of veritable old men of the sea, obsessing the lives of the little sufferers, without a suspicion on our part of the true state of affairs. Children are so inarticulate in matters of this sort that we must be Argus eyed indeed if we are to afford them the protection from themselves that they are entitled to receive. If we take this duty seriously, we can watch them closely without their being aware of scrutiny.

Probably the wisest attitude to take, in dealing with compulsive ideas when we have unearthed them, is to enter into them as if they were something to be enjoyed and laughed at with the child; this is quite a different thing from laughing at him. When these notions are thus taken out and ventilated in the free air of laughter and frank discussion, in place of lying hidden and cankering in the inmost recesses of the child mind, they lose much of their power for harm. The negative force of prohibition, ridicule or argument against them is not effective. They must be treated as interesting and amusing vagaries that can be discussed without fear or shame by two friendly observers, the child and the parent. Such commonsense sanitation accomplishes wonders.

### *One Compulsion Often Follows Another*

It need cause no surprise if, when one of these compulsive ideas clears up, another takes its place. This sometimes occurs in a way that would be most discouraging, if its probable occurrence were not anticipated and its importance thus discounted in advance. When once the habit is established of confiding in a sympathetic adult the second condition is far easier to deal with effectively.

Correction lies in clearing up the underlying causative conditions of the nervousness that forms the basis of this and other nervous manifestations. It is in the seriously depleted, highly neurotic child, whose condition is being neglected either because it is not recognized or because its gravity is not realized, that compulsions attain their greatest potency for harm. If we are alert to their danger and are intelligently on the lookout for trouble, it ought to be relatively easy to detect them early enough to rob compulsions of their terrors.

# The Place of The Senses in Science and Its Development

By William J. Mayo

## Part II. The Sense of Sight

IN THE higher mammals, among which man is dominant, vision has secured direct pathways to the upper brain, and the sense of sight, giving comprehension of space, time and motion, has overborne the sense of smell. Pressure changes in the surroundings affect touch and hearing; changes in radiant energy affect the eyes. The mechanism of the human eye is in some respects inferior to that of the eye of some of the lower animals. With the telescopic vision of the eagle, man could read fine print at 500 feet.

Certain fishes in the depths of the sea radiate cold light, not necessarily connected with the eye, but emanating from specialized cells in various parts of the body. The nature of this light varies according to the habits and necessities of fish life, and it makes possible a certain amount of vision. Cold light is also seen in the glowworm, the firefly and other animals. Much research is being carried on to determine the nature of this light, in the hope that it may be used instead of the hot light obtained by present-day methods of oxidation.

The eyes of many of the lower vertebrates have separate vision, and in only two diameters, length and breadth. The higher mammals, for instance man, with binocular vision, see in three diameters, length, breadth and depth.

### *Intelligence behind the Eye Makes It Supreme*

One hardly need call attention to the fact that it is not the mechanism of the eye that is triumphant but its relation to the intelligence of man.

While the sense of sight is dominant among the special senses, owing to its accuracy, it is remarkable that those who lose this sense in infancy can, with training, substitute for it the senses of hearing and touch. Helen Keller is an example of an intelligence of high order developed largely from the sense of touch. We must remember, however, that in this training the teacher's sense of sight takes the place of that of the pupil. The intelligence is there, but it is not efficient until trained. The ear-trained and touch-trained blind man would not be so easily deceived in the dark by the faker as the eye-trained man suddenly placed in the dark, who would be more likely to be controlled by his ancient emotion of fear in the dark. Memory can be spoken of as mental photography.

The sight of man is not quick, and on this fact was based the old adage "The hand is quicker than the eye." It must be borne in mind, however, that the hand in question is the hand of a prestidigitator educated by the eye.

### *Vision Predominant in Medical Sciences*

In studying the history of medicine it is significant that in the 10,000 years of Egypt's history there were no less than eight complete relapses into barbarism, and there is little of value to scientific medicine in the meager records of those times.

Medicine began with the earliest peoples as an appeal to the emotions through occultism, and here originated the cults, which still abide with us. New cults come as the fraud of the old ones is exposed.

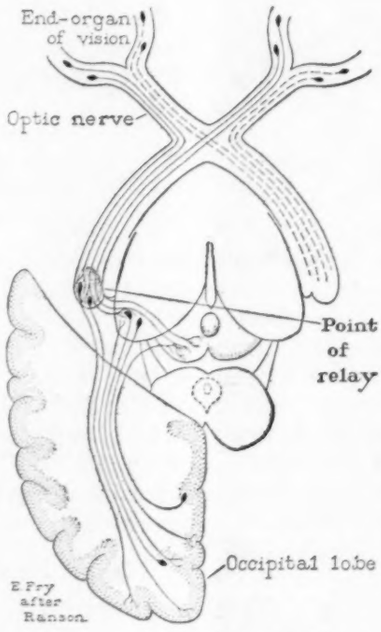
Scientific medicine had its beginning in the fourth century before the Christian era with Hippocrates, who founded clinical medicine, and with his near contemporary, Aristotle, who developed deductive reasoning and a primitive form of inductive logic, on which science rested securely for 2,000 years. The great school at Alexandria with its museum and library founded by the Ptolemies in the third century B. C. was the center of learning. Here the students of Aristotle developed and gave to the world the priceless gift of scientific methods. In the eleventh century Abelard founded scholastic education; in the thirteenth century the first university was established.

In the sixteenth century Francis Bacon introduced into philosophy inductive reasoning. William Harvey, contemporary of Bacon, applied inductive reasoning to medicine and by experimentation established physiology on a sound basis. In this great Elizabethan or Shakespearean century came also the first of the physician-chemists, John Mayow, whose investigations led to the discovery of oxygen. In 1590,

the Janssens brought out the microscope, an invention that was to revolutionize science. The present day microscopic limit is $\frac{1}{10}$ micron, or $\frac{1}{250,000}$ of an inch.

The invention of the microscope increased the power of vision and made possible the epochal work of Pasteur, which led to the popular recognition of the rôle of microorganisms in the causation of disease, with the result that the scourges of contagion, infection and infectious diseases, which could be survived only by persons with natural or acquired immunity, have nearly disappeared. Scientific medicine has advanced more in the last fifty years through the extension of vision by means of the microscope than in all previous time. This is demonstrated by the illustrious work of Pasteur, Virchow, Lister, Gorgas and other eminent men of science who have created, so to speak, health and prolongation of life.

We see, as through a partially opened door, new gifts to man, through further extensions of vision into the submicroscopic field, which includes particles $\frac{1}{1,000}$ micron, or $\frac{1}{25,000,000}$ inch, in diameter. The romance and adventure of modern research lie in this ultramicroscopic realm.




*Scheme of the connections of the fibers of the optic nerve.*

In the years from 1803 to 1844 Dalton promulgated the atomic theory and investigated the constitution of the molecule, with so few instruments of precision that the exactness of his results bordered on the miraculous. As the result of the most extraordinary improvements in methods which are ultimately visual, knowledge has been gained of the field of the colloids as well as the molecule and the atom.

Sir William Bayliss has well said that there is no line of demarcation between physics and chemistry. In other words, it is only under certain physical conditions that those alterations in the atomic constitution of molecular bodies which we speak of as chemical changes take place.

The ray of light travels 186,000 miles a second. When the ray of light is refracted, as by colloid bodies, it is resolved into rays of various wave lengths and speeds of vibration which are recognized by the retina of the eye as colors. The longest wave appears as red, and, in order of the length of the waves, orange, yellow, green, blue and violet are seen. On the relative length of these waves, the colorimetric system in medicine is based. With the x-ray the molecule and atom can be analyzed.

Photography plays a great part in fixing for deliberate study with the eye objects in rapid motion. One twelve-millionth second suffices to make a photograph that will show a bullet in flight at a muzzle velocity of 3,000 feet a second as if it were standing still.

A remarkable fact is that colloids, molecules, atoms, electrons and protons, unlike particulate substances that are microscopically visible, remain in rapid motion more or less permanently suspended in their medium in spite of the force of gravity, although all are affected by pressure, temperature and atmospheric conditions. Only under certain physical conditions can the electric exchange of electrons and protons in the atomic field of the molecule take place.

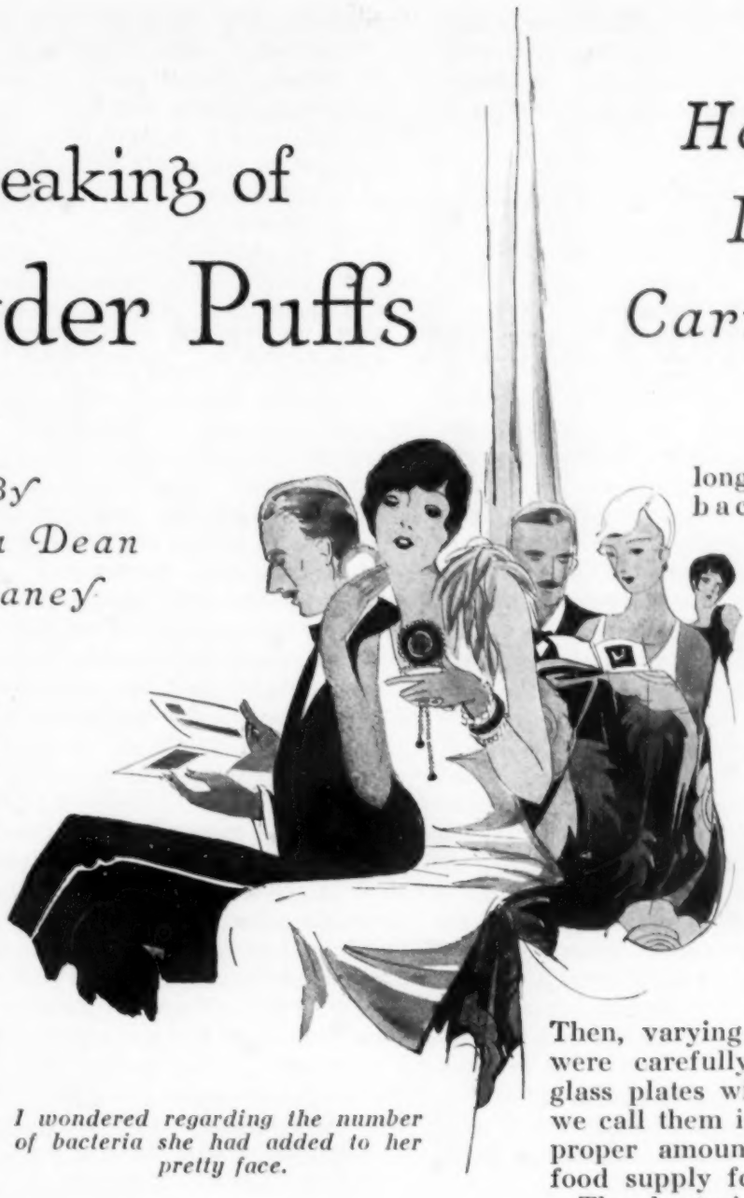
Moseley, Thompson, Bohr, Milliken and other great men working in the field of pure science have developed methods of analysis that give new insight into the practice of medicine and have enabled a critical analysis of the functions of bodily organs. From colloidal chemistry there is now being built a new physiology of man and a better understanding of vital phenomena. Today, in certain instances, restoration of the sick can be as precisely accomplished in the living body as similar chemical changes in the test tube.

In the sixteenth century the average lifetime of man was twenty years. The microscope has given us knowledge of the cause, cure and prevention of disease, thereby increasing the average lifetime of man to fifty-eight years. Investigations of the ultramicroscopic field, which we are now entering, give promise of increasing the average lifetime to the scriptural age of three score and ten.

# Speaking of Powder Puffs

## How Long Do You Carry Yours?

By Anna Dean Dulaney



*I wondered regarding the number of bacteria she had added to her pretty face.*

THE end of the act, the lights flashed on, and the pretty girl next to me at the theater turned, with a laughing remark, to her escort on the other side and drew out the inevitable vanity case.

I watched her, first because of her pretty face and fresh young charm, but later because of a sort of fascinated horror at the filthy state of the powder puff that came from the highly ornate silver box. Nose and chin were treated in a discriminating fashion and, with a final satisfied glance into the mirrored cover, the puff was tenderly returned to its holder and the lid snapped shut.

Scientific speculation—for, alas, I happen to be a bacteriologist—almost overcame dramatic appreciation, and I wondered regarding the number of bacteria that she had added to her pretty face. I could not but think that nature is a kind and generous friend, an unappreciated friend often times because of those abundant qualities.

Several days later, as I crossed the familiar university campus, I found a vanity case much like the one carried by the pretty girl. Somewhat more curious than scrupulous, I opened it, and there lay the usual soiled powder puff. No longer could I repress my bacteriologic instincts, and I carried that little puff to the laboratory, where I made a count of bacteria attached to it.

This really is a simple procedure, and the results, while not altogether accurate, indicate approximately the true bacterial count. I cut the small puff into four equal parts, placed one part in a known amount of sterile water and let it remain there for a short time to dislodge the bacteria. Then, varying amounts of the water were carefully transferred to sterile glass plates with covers—petri dishes, we call them in the laboratory—and a proper amount of culture media, or food supply for bacteria, added.

The bacteria—say "germs" if you prefer—finding suitable food, multiply and form groups, or colonies. Each colony represents the growth from one bacterium. These colonies were counted and by calculation the total number of germs clinging to the part of the powder puff used was obtained. This number multiplied by four of course gave the total count for the entire puff. It was 20,000. Twenty thousand bacteria clinging to a powder puff to be used on a clean face!

An examination of some of the colonies was made, and various types of bacteria were found. Many of them were harmless, but some were of the type that could have played a part in infection.

Many skin diseases that are disfiguring and embarrassing are due to lack of proper cleanliness. The pores of the skin are for purposes of elimination of waste and moisture, and when they become clogged with dirt and powder suitable conditions for infection are provided.

Powder puffs may easily be washed and, what is more important, fresh ones may be purchased cheaply. New puffs which have been sterilized and wrapped in papers may be bought for a few cents each. A whole year's supply of clean, fresh powder puffs could be purchased for a few dollars. Such an addition to the budget would seem worth while.

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# The Mental Patient in the Community

*By L. D. Hubbard*

MORE truth than fiction lies in the common saying that there are more mentally ill people outside institutions than in them. That does not prove, however, that people with mental disorder are as well off outside a hospital as in it, nor does it prove that society is as well off when mentally ill people are free to make such adjustment as they can in an environment for which they are unfit. The argument seems to be that if a large number of sick people are going without treatment, all sick people might as well do the same. The fallacy of such reasoning is apparent at once.

On the other hand it cannot be said that all people suffering from mental illness should remain in a hospital until they get well or die. There are plenty of such people who can safely and even advantageously live in the community provided they are under adequate supervision. The important point is who shall decide which patients suffering from mental disorder should remain in an institution and which patients may be cared for in their homes?

### *Families Should Help Decide*

Obviously the first ones to have the opportunity of making a decision of this sort are the members of the family. Often the sufferer is in need of treatment long before his relatives are aware of it. He himself may or may not realize that he is the victim of a mental malady. Only too often, however, the sick person knows something is wrong and begs to be taken to the hospital only to be met with kindly reassurances or thoughtless ridicule from those misguided well-wishers who have no knowledge by means of which to judge the seriousness of his condition.

When the person's behavior becomes so noticeably erratic that he can no longer adjust himself to the standards of his environment, his family may at last take him to a hospital; or worse, he may come to the attention of the authorities and be forcibly removed from the community. In the latter case his first destination is often the jail, for abnormal conduct so startling as to attract attention outside the home is usually contrary to the statutes and is not interpreted as the expression of a disordered mind until after a period of observation. All the time elapsing between the sufferer's first warnings and his admission to the hospital is time wasted, for in the incipient stages of his illness much might be done for him, perhaps even to the extent of warding off the worst of the attack.

Once the mentally ill person is admitted to the hospital it remains for him to be committed, and the decision as to whether or not he is to have treatment suited to his condition lies in the hands of the court, perhaps of a jury. That they are not competent to judge is shown by the tragic results that sometimes follow the discharge by court of a mentally ill patient.

But suppose the patient is committed. Unless the court is again brought into the picture by means of a petition for a writ of habeas corpus, the length of the patient's stay in the hospital is in the hands of the physicians. Even psychiatrists whose lives have been devoted to the study of mental illness in all its phases are not infallible and errors of judgment are likely to occur occasionally even when the matter is left to them, but the proportion of errors is not great.

### *Indefinite Visits Home from Hospital*

The system of indefinite visit, which is used to good advantage in many hospitals, does much to reduce the chance of error to a minimum. With this arrangement a patient may be eased out of the hospital gradually by means of trial visits until he goes on an indefinite visit and is placed under the care of the social service department. Thus he remains on the hospital rolls for six months or a year or perhaps more, proving by his successful adaptation to his environment that he has recovered and that a recurrence of his trouble is not imminent. This supervision is a safeguard to the patient and is rarely a source of any inconvenience. At the time of his trial visits and perhaps at the begin-

ning of his indefinite visit, he is still in a state of convalescence and his recovery is brought to a completion while he is in the community.

There are, however, many patients who can enjoy visits under supervision while they are still mentally ill and are showing no signs of convalescence. For example, a patient who has been ill for so many years that emotion and intellect are greatly deteriorated may go to the home of a kindly and devoted family for visits of many months without harm to himself or to the community.

One such instance comes to mind. A colored girl suffering from chronic mental illness was allowed to go to the home of her two sisters, where she lived some months; she was dressed and bathed by her devoted family, led out daily for fresh air and exercise, watched over constantly night and day. The visit was a source of pleasure to the sisters, a matter of complete indifference to the patient. But it is seldom that a family can afford to give so much attention to an invalid no matter how beloved, and even this family returned the patient to the hospital eventually because one sister was breaking down under the unceasing strain.

### *Require Constant Care*

What is more, all the love and devotion in the world cannot teach untrained people the fine points of caring for mental patients.

The casual observer often thinks it is a shame to keep such patients in a mental hospital when they are not "violent" and do no harm. It is true that they could be cared for at home if there were day and night nurses trained in the management of such cases and a physician within immediate reach in case of alarming symptoms, which are likely to occur at any moment when the human mechanism is almost worn out. The skin of a bed patient requires constant care in any illness, but age and neurologic disorders make the skin infinitely more liable to pressure sores.

In addition to the constant physical care that is necessary to keep the body in as healthy a condition as possible, it takes a trained and sympathetic person to deal adequately with the mental vagaries of such a patient. More than love and devotion is needed to respond kindly but firmly to the irritability and the irrationality of a diseased mind. It takes a world of experience and understanding to bathe, feed and otherwise minister to a mentally ill patient in the face of physical resistance and mental inadequacy.

There is one type of mental disease in particular in which long remissions frequently occur. The patient is to all appearances well. He feels well and perhaps remembers the period of abnormality through which he has passed and from which he now believes himself to be free. His conduct is normal, his mental processes, so far as they concern his life in the hospital at least, appear adequate, and any convulsions or other nervous manifestations have ceased.

But years of experience have taught the physician that this is one of the trickiest of all mental illnesses. Examinations of various bodily fluids show that the organism originally causing the disease that resulted in mental breakdown is still at work although all symptoms have disappeared. Should this patient be returned unsupervised to society the sudden reappearance of symptoms might at any moment cause a calamity of hideous proportions. The faulty judgment and unfounded optimism that are characteristic of the disorder might wreak havoc in his business affairs. The convulsions and periods of confusion might return without warning to result in serious injury to the patient or even to others.

Even when no actual physical harm is likely to come to the patient or to society from his freedom in the community, it is not always best to allow the patient to leave the hospital. In a home in which there are children it is manifestly unfair to them to allow a mentally abnormal person to absorb the time and attention of the family. The formative years of a child's life should, without question, be spent in as normal and healthy an environment as possible. There are enough unavoidable disharmonies in every child's life without adding to it the strain of living with a mentally abnormal person.

### *Dangers in Automobile Driving*

Another source of danger to society is the fact that patients who have had automobile driving permits while in good health see no reason why these should not be used as soon as they leave the hospital. Doubtless in nine cases out of ten no harm results. Should such a patient have suffered from an organic lesion, a true disease of the brain, automobile driving even after symptoms have disappeared is a source of infinite danger. A moment of confusion, a sudden faint, a muscular spasm, and the car is free to pursue its unguided way to the destruction of lives and property.

The discussion of misfortunes resulting from the presence of mental patients living unsupervised in the community might continue endlessly, for examples are innumerable. Suffice it to say, however, that a person suffering from a mental illness should not be allowed to live in the community except with the consent of psychiatrists familiar with the case and then only under supervision of the hospital social service department. Thus and thus only can the patient and society be adequately safeguarded.

# Arrival of August

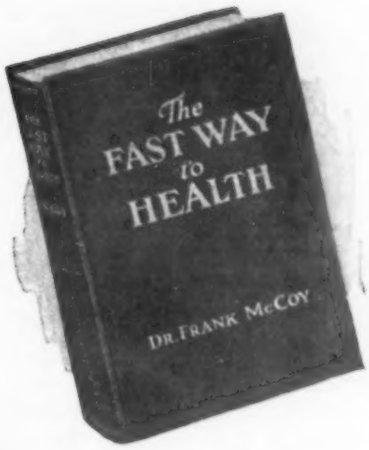
H. Armstrong Roberts

Michael Greenan

Melander, Chicago

# More McCoy Misinformation

## *The Fictions and Fallacies of* "The Fast Way to Health"




*By H. W. Hill*

[EDITORIAL FOREWORD.—Under the title "The Misinformation of McCoy," HYGEIA for April, 1927, carried an editorial dealing with one Frank McCoy, a chiropractor, who dubs himself "Dr." and furnishes large amounts of pseudo-medicine, dietetics and hygiene to the undiscriminating.

McCoy publishes a book entitled, "The Fast Way to Health," the thesis of which is that practically everything that ails the human machine can be cured by fasting. During the past year McCoy has been furnishing, to such newspapers as are willing to publish them, columns of "Health and Diet Advice" that reek with absurdities. On the basis of his own writings, one conceives McCoy as being as grossly ignorant of anatomy, pathology and physiology as he is of the science of nutrition.

The article that follows, by Dr. H. W. Hill, professor of bacteriology and of nursing and health of the University of British Columbia and director of the Vancouver General Hospital laboratories, is a series of running comments on some of the more glaring crudities, medical and dietetic, that appear in McCoy's "The Fast Way to Health."—A. J. C.]

* * * * * * *

THE book "The Fast Way to Health" is almost incredibly antique in its material; much of it is incorrect, fallacious and misleading. Its author, Frank McCoy, who is not a doctor of medicine but a chiropractor, has set together in this volume a most complete collection of traditional grandmothers' tales concerning medical matters. Obviously innocent of first year medical student anatomy and of physiology of the twentieth century, this book serenely and confidingly presents depths of ignorance, as though the matter represented first-hand knowledge and the experience of lifelong scholars in medicine.

One feature of the book is its lack of originality, since it seems to be largely made up of the folk lore of the European peasant; another feature is its unconscious boldness, displaying as it does to a modern audience childlike traditions as up to date medicine and dietetics.

True, reliance on the ignorance and credulity of the general public when anatomy, physiology and medicine are concerned may be justified by the following this book is said to have accumulated; presumably among that large and uncritical section of the public from which the fake stock promoter and the gold-brick men reap their harvest.

It is said that a large proportion of business men fail at some time in their business careers and that of a hundred average citizens only six are financially independent when they reach the age of 65.

This condition is understandable when it is appreciated how easily the business man is impressed by the mere unsupported say-so of men without education or scientific standing, without facts or evidence; whose claims they accept without inquiry or consideration; and on whose pretensions they rely for the most responsible decisions concerning their own health and life and the health and life, often, of their relatives and friends.

The comments that follow cover but a few of the misstatements of fact, the fantastic deductions and the fabulous advice given. Such misstatements occur on almost every page and are evident to any trained anatomist, physiologist, biologist, chemist or physician. The comments are confined to a casual selection of such errors as will be obvious to those without medical training as soon as their attention is called to them, errors the fallacies of which can be in most instances refuted from general information and experience, without recourse to the special information of the physician:

> *Says McCoy:* "First and foremost in the cause of disease is the congestion of blood containing morbid material in organs or tissues of the body. In simple language this thickened blood . . . finds itself unable to pass as freely through certain parts of the body as is necessary for perfect health . . ."

COMMENT: There is no such thing as thickening of the blood causing congestion, except, possibly, in a certain rare condition of a comparatively rare disease, polycythemia. The changes in the blood that could possibly by any stretch of the popular imagination be called "thickening" of the blood are ordinarily so slight as to be detected only by the most delicate tests; they have no effect on the circulation, either to quicken or to slow it. Congestion of organs has an entirely different cause. It means increased blood in a part.

*Says McCoy:* "This condition of the bloodstream is brought about by: the use of more food than the body actually requires for its repair and growth; the improper kinds of food elements, used in excess; and insufficient exercise . . . This is one of the main causes of growths such as tumors and cancers." (The fasting cure is then given as the most effective.)

COMMENT: The cause of tumors and cancer is, unfortunately, not yet known. It does not correlate with overeating or starvation; with civilization or savagery; with too much exercise or too little; or any other known factor yet investigated on the most extensive scale in university, government and private laboratories all over the world. In starvation of cancer-affected bodies, the "tumor" grows rapidly while the body emaciates. Every one knows that in cancer of the stomach, starvation is the rule, yet the cancer advances and terminates in death unless removed early by operation. If fasting were a cure, cancer of the stomach would automatically get well.

*Says McCoy:* "It [fasting] can be used in some form in the treatment of every acute or chronic disorder . . . I do not know of a disease where fasting is contra-indicated."

COMMENT: Tuberculosis, neurasthenia, the anemias, all prolonged and severe diseases, require nourishment in excess of the usual demand; to say nothing of rickets, scurvy, beriberi, pellagra, diabetes, which each in its own way requires special forms of nourishment. Children with whooping cough sometimes die of starvation brought on by the vomiting due to the disease which should, on the McCoy thesis, be cured by that very starvation!

*Says McCoy,* in describing the early symptoms of fasting: ". . . elimination is increased and the accumulated toxins which are being ejected from the system will generally produce a condition similar to biliousness with headache and often nausea for the first day or two."

COMMENT: Note that he says the ejection of the toxins causes the trouble! It is not the ejection of toxins that causes trouble but their retention in the body. The symptoms he calls "biliousness" are well recognized in medicine as those of early acidosis, which sometimes develops fatally.

*Says McCoy:* "The time to fast is when suffering from any acute or chronic disease and the fast or series of fasts should be continued until the patient is cured."

COMMENT: This may be fatal advice to give the tuberculous, the cancerous, the anemic and the diabetic, because of the harm done to the body, already sufficiently burdened with the disease itself, and because it distracts attention from the real measures required. This is particularly true of tuberculosis and cancer, in which this advice, involving delay as it does, is fatal.

*Says McCoy,* under "Biliousness or Torpid Liver": "The 'blues' are usually caused by this retention of bile."

COMMENT: This whole section is a rehash of the old wives' fables on which much of the inherited current popular medical belief of the early Victorian era was based. It is not only unoriginal, but merely borrows and incorporates as scientific fact the back-door gossipy philosophy of the ignorant. No such thing as biliousness is recognized in scientific medicine.

*Says McCoy:* "Pain in the back over the region of the kidneys" is one of the symptoms of Bright's disease.

COMMENT: Again, this is a current fallacy. Pain in the back is practically never due to kidney disease; kidney disease practically never gives pain in the back. Every quack trying to sell kidney pills has exploited this falsehood from time immemorial.

*Says McCoy,* in dealing with bronchitis: "In catarrh of the nose and throat . . . the membrane has been literally soaked in mucus for years." Also: "A catarrhal bloodstream, which was depositing its mucus and waste products in the lungs." And further: "Catarrh and hay fever . . . due to the discharge of mucus from a bloodstream surcharged with . . ."

COMMENT: McCoy here revives again ancient fallacies concerning mucus as a poison of the body, a theory belonging to the ignorance of early generations. Mucus is a normal substance prepared on the inner surfaces of the body as a lubricant and mild antiseptic; there is never, at any time, any mucus whatever in the bloodstream, either in sickness or health.

*Says McCoy:* "It is the popular belief that the blood is pumped from the heart to all parts of the body . . . My investigation has shown that only waves of blood are sent out by the heart into the circulation and that these waves partially purify the blood as they pass along . . ."

COMMENT: Again an ancient fallacy, negatived by every test of every anatomist and physiologist in the world! The circulation of the blood is as undeniably established as the rotation of the earth on its axis.

*Says McCoy* about diabetes: "In every case the sugar in the urine is caused by the liver's inability to take care of the sugar and starch assimilated."

COMMENT: Even the man in the street knows, since Banting's work became public property, that diabetes is due to injury of the pancreas, not the liver. Has McCoy never heard of insulin?

*Says McCoy:* "If a cancer of the uterus exists it may be cured in certain stages by a long fast."

COMMENT: There is no method of cure at any stage except early operative removal of the cancer, and all advice from any source leading to delay is fatal ignorance or negligence.

*Says McCoy:* "The eruptive fevers, such as measles, chickenpox, smallpox and scarlet fever, are all produced by different poisons which have accumulated in the body because of wrong habits of life."

COMMENT: Utter nonsense. Every one knows that young children contract these diseases when in perfect health, and as a result of exposure to other persons already having them. Most people also know that those who have had these diseases once do not, as a rule, irrespective of their habits of life, contract them again, even though nursing those sick with them. No more fallacious statement could be made nor one more susceptible of complete refutation from the daily experience of every physician.

*Says McCoy:* "The largest percentage of cases [of influenza] eventually die of tuberculosis."

COMMENT: A plain, direct misstatement of facts well known to nearly every one; those who have had influenza do not die of tuberculosis in excess.

*Says McCoy:* "Large gallstones have been removed by my treatment." [The administration of olive oil and fruit juice.]

COMMENT: This again is an ancient fallacy believed by the man in the street for generations, although exploded again and again. Olive oil—in fact, many bland oils—when taken in large quantities, produces soapy concretions, which appear in the feces. These are, not unnaturally, thought to be gallstones. If the patient has no gallstones to begin with, he is thus "relieved" of that which did not exist. If he had them to begin with, they, of course, remain in the gallbladder, where subsequent operation or x-ray photographs will show them exactly as they were originally. This, again, is an unoriginal adoption by McCoy of back-door medical gossip; it is as reliable as the legend that if you pick up a guinea-pig by its tail, its eyes will drop out.

*Says McCoy,* in dealing with goiter: "The [thyroid] gland may be enlarged gradually through a constriction in the neck caused by the collar bone pressing down upon the thyroid, or it may be enlarged suddenly during childbirth, if the patient is allowed to throw her head backward while making a certain kind of strain in an effort to aid in expelling the child. This may be avoided by the nurse holding the patient's head up and not allowing her to throw it backward."

COMMENT: Nothing more crudely and ignorantly false could be found in the annals of central African negroes, concerning the causes of thyroid enlargement. These statements are absolutely false in every particular and have not even tradition to excuse them. They seem to be wholly original with McCoy, since no one else has advocated such absurdities. The causes of thyroid enlargement are various, but a common one is lack of iodine in the diet.

*Says McCoy,* about tachycardia (or rapid heart): "The cause of this condition is to be found in valvular leakage of the heart, which makes the extra heart beats necessary in order to disseminate the blood properly through the tissues."

COMMENT: Contrast this with the statement already quoted, to the effect that the heart does not pump the blood through the body. Tachycardia is by no means always due to valvular leakage; it frequently occurs in conditions in which no valvular lesions exist.

*Says McCoy,* of hernia (rupture): "When a break occurs in the peritoneum and the intestines protrude through the opening, it is called a rupture."

COMMENT: It is an outstanding feature of almost every hernia or rupture that no tear of the peritoneum exists. The peritoneum almost always remains intact; in fact, it can be seen bulging out through the opening in the abdominal wall.

This is the completest example conceivable of the writer's utter ignorance and of his inimitably fallacious theories, based upon that ignorance.

*Says McCoy:* "Mastoiditis . . . is quite common among children who have been fed an overabundance of sugars and starches."

COMMENT: It is equally "common" among children who have not been fed an overabundance of sugar and starches.

*Says McCoy:* "Cows' butter contains 100 per cent fat."

COMMENT: Cow's butter contains from 80 per cent to 85 per cent fat.

*Says McCoy:* "This organ [the heart of animals] should not be used for food" because it contains "many more times the normal amount of poisons." He says further: "As the death of an animal draws near, the circulation stops in the extremities first, and then the other parts of the body die slowly, until circulation finally comes to an end in the heart."

COMMENT: The heart is no more full of poisons than any other muscle of the body. The circulation continues until the heart stops and then ceases; it is not the circulation that keeps the heart going, but the heart that keeps the circulation going.

*Says McCoy:* "Pork sausage . . . is almost the only cause of ptomaine poisoning . . . out of hundreds of cases I have handled of this form of poisoning."

COMMENT: Instead of ptomaine poisoning being so common that McCoy has handled hundreds of them, it is a fact, well known to science, that there are no such cases at all. The name ptomaine poisoning was invented and applied years ago in ignorance of the facts. Attacks popularly called ptomaine poisoning are really due to distinct forms of poisoning and not especially associated with pork at all.

# The Rubaiyat of Oh! How-Well-I-Am

Continuing a Series by

*BEATRICE SLAYTON HERBEN*

IX

Hands such as thine look clean, but they are not!
So say the doctors. They're a jolly lot!
For dust that harbors germs invisible,
Is worse by far than dirt from off a pot.

Look to your skin! (Sure! Save it. That's the dope!
Whether from sickness or the hangman's rope.
A skin once lost is seldom then returned.)
Water is good, and now and then some soap.

*Say it with showers.*

X

In paradise they never ring a bell;
For fountains run with milk, or so they tell.
At any hour the saints may eat and drink!
(I think the fat ones better go to—well—)

But while you tarry on this earthly sphere,
I doubt not you'll be wiser if you hear
And heed the words of Oh-How-Well-I-Am,
"Take food at certain hours, and eat with cheer!"

*Regular meals are especially necessary to the health of children.*

XI

A frightened shepherd told a Moslem priest
That all his herd grew jazzy at a feast
On coffee seeds. The Moslem took some beans
And made a drink. The drinking never ceased!

Some kick against the kick which oftimes floats
In coffee cups. I know of few "teetotes."
Let grown-ups drink their coffee if they must.
They should not let the kiddies be the goats!

*Children grow stronger on milk than they do on coffee.*

XII

Full many a red and flannel shirt forlorn
Of all its virtue in pneumonia shorn,
Has stalked its lonely way from off the stage
To hide itself with other garments worn.

Ere you go off, my shirt, Oh pray you, deign,
Protect me from just one more winter rain!
You're not so scientific that, once gone,
I'll ever dare to dig you up again.

*Keep your feet dry and your mouth shut. Exposure may render you susceptible. Open mouths invite germs.*

XIII

Some look for health in pills and some in rules,
Some grope for it in stuffy, cheerless schools,
But from the wind-swept fields, a voice proclaims
"Your health lies neither there nor there, O fools."

Oh, contemplate the lilies! Look I say!
And chase your patent humbugs quite away.
The sun has spread her golden vesture down,
And bids you to her picnic! Come and play!

*There's more health outdoors than ever was put in bottles.*

XIV

Were it not folly, if indeed not sin,
Claiming the gloomy ground-hog as our kin,
To sleep all winter in a stuffy hole
Breathing the same air out as we breathe in?

Tonight throw wide the shutters! Let the air
Wrap thee around with velvet sleep, O fair,
Lay winter's fresh red roses on thy cheeks
And soothe thy spirit while it ruffs thy hair!

*Bad air and poor health are birds having similar feathers!*

XV

Who was it that spread flu today? Not I.
Who opened up his mouth and sneezed? Not I.
Who spat upon the prone and passive ground
The seeds of human pain? In truth, not I!

An epidemic, with its whirlwind sword,
Must first be loosed upon the passing horde
By one who's wide of mouth and blind of eye
And hard of heart!—How long, how long, O Lord?

*Those who cough, sneeze and expectorate improperly are responsible for infectious diseases.*

XVI

They say that John Doe killed his brother Bill,
Who willed his cash a stranger's purse to fill!
I marvel at the worm this John Doe is,
Who broke the head but dares not break the will.

Oh, not so fast, my friend, pray not so fast!
For wills, I've never cash enough amassed!
Well, if I must—my last will is my first!
My first will is that I myself shall last!

*Get a health examination! See a doctor once a year and you'll see many years.*

# Planning Meals *for the* Tuberculous

## When the Patient Is Being Treated at Home

*By*
*Sister Rose Genevieve*

YEARS of experience and study have taught physicians that the cure of tuberculosis must be sought in such hygienic measures as rest, fresh air and proper nutrition. The problem of nutrition is admittedly a fundamental one; it exercises a controlling influence in the battle of the patient against his malady.

The dietetian and nurse in a sanatorium are guided by skilled physicians who in most cases prescribe the diet for the individual, but in many families there are tuberculosis patients who cannot afford sanatorium treatment and who have no one about them who is educated in the science of nutrition. For these this article has been prepared.

The most essential requirement in the treatment of uncomplicated pulmonary tuberculosis is an abundance of good, wholesome and varied foods. These should be prepared into attractive dishes so as to stimulate the patient's appetite, which, as a result of wasting disease, may have become seriously impaired. Of course in cases complicated by intestinal tuberculosis a radical change in the application but not in the principles of a diet is needed; for instance, cellulose or other roughage must be deleted and to a certain extent organic acids, on account of irritating the lesions and aggravating diarrhea.

Gastric disturbances are such a marked feature of the disease that even under the best of conditions proper digestion and assimilation are difficult. The type of diet I am outlining is used in Glockner Sanatorium, Colorado Springs, and is known as a general tuberculosis diet. It is well balanced in mineral salts, vitamins, carbohydrates, protein and fats. Good results are obtained by an adequate but not too abundant diet. Much harm is often done by overfeeding the patient before the digestive system is properly prepared for it; feeding should be begun with moderation until the patient's appetite has been stimulated and until a perfect digestion of a limited amount of food is obtained. Feeding the patient too much defeats its own end.

The importance of vitamins cannot be sufficiently emphasized in a general diet of a tuberculosis patient. Guinea-pigs inoculated with tuberculosis hold their weight and live longer on a high vitamin diet than on a low vitamin diet. Orange juice must be considered more than merely a refreshing drink and an antiscorbutic, in view of recent experimental evidence. Oranges bring about a retention of protein nitrogen and minerals and their juice should be given between meals as extra nourishment.

To plan a high caloric diet, one naturally takes advantage of such foods as milk, cream, butter, eggs and meat on account of their highly nutritive value, but if these are used too abundantly the patient does not relish them and when he refuses them it will be difficult to find a substitute. It is better to use these foodstuffs in moderation at first and gradually accustom

the patient to the ingestion of more. This is particularly true of milk.

Milk in the diet of the tuberculous is so strongly emphasized because milk is one of the cheapest and most easily digested sources of animal protein. It is a highly nutritious food and, besides, it contains the essential amino-acids for protein structure and repair. A quart of good milk is nearly equal in nutritive value to a pound of beefsteak. As an article of diet in the treatment of tuberculosis, milk occupies a unique position. No one food is of such great value. Every effort should be made to enable the patient to drink at least a quart of milk a day. If he tires of the whole milk, it may be used in cooking or by blending it with beverages.

Our tuberculous patients have milk for luncheon three times a day, but if they tire of it we change the nourishment somewhat; for instance we give at 10 a. m. a chocolate malted milk; at 4 p. m. an eggnog and at 8 p. m. a hot chocolate. In this way the patient is taking the milk and seldom refuses it.

Cream should also find a place in the dietary. Custards containing milk, eggs and sugar are high in calories. Ice cream should be given often. Butter is strongly advised, for the ease with which it is digested renders it of great value as a source of fat. Eggs are high in iron, their proteins are complete and the fat they contain is in an emulsified form. Eggs are a good source of fat soluble vitamin A. The meat used in the diet is generally roasted, obviating the acrolein of fried foods, which further impairs a weakened digestive function. Roasting also prevents loss of the hemoglobin and other important constituents that would to a certain extent be lost in boiling.

Great care must be taken in cooking the foods contained in the menus outlined. Proper cooking is the basis of all dietetic science. The valuable nutrient foods mentioned in these diets are of no use to the patient if they are poorly prepared. Boiling vegetables in a great quantity of water for a long time is wasting both fuel and important mineral salts. Steaming is always preferable to cooking in water. When cooking vegetables in water one should use very little water and should cover them, thus giving them a chance to steam in their own juices and preserving the aroma as well as the nutrient salts. It is not unusual to see cooks place the vegetables in a large quantity of water, cook them over a high flame, and when the vegetables are done drain the water off and throw it away. They do not realize the important constituents, flavor and money that are thrown away in this water.

In the next column are some simple menus picked at random from the general dietary used at the Glockner Sanatorium. The caloric value of these diets is between 2,700 and 3,000 calories depending on small or large servings.

### MENU 1

*Breakfast*

Stewed Prunes
Oatmeal — Cream — Sugar
Crisp Bacon — Buttered Toast
Coffee
Nourishment at 10 a. m.—Chocolate Malted Milk

*Dinner*

Chicken Broth with Rice — Crackers
Broiled White Fish
Sweet Gherkins — Apple and Celery Salad
Parsleyed Potatoes — Asparagus Tips on Toast
Bread — Butter
Spanish Cream
Milk
Nourishment at 4 p. m.—Eggnog

*Supper*

Cream of Wheat — Sugar — Cream
Broiled Lamb Chops
Baked Potato — Tomato Salad
Toast — Butter
Glazed Apple
Nourishment at 8 p. m.—Hot Chocolate

### MENU 2

*Breakfast*

Grapefruit
Milk Toast — Cream — Sugar
Poached Egg — Buttered Roll
Coffee
Nourishment at 10 a. m.—Orange Albumin

*Dinner*

Cream of Tomato Soup — Crackers
Roasted Chicken
Celery — Fruit Salad
Mashed Potatoes — Green Peas in Butter
Bread — Butter
Fruit Pudding
Milk
Nourishment at 4 p. m.—Grape Juice

*Supper*

Escalloped Eggs — Baked Sweet Potato
Tomato Salad
Toast — Butter — Cream
Sweet Peaches
Milk
Nourishment at 8 p. m.—Malted Milk

### MENU 3

*Breakfast*

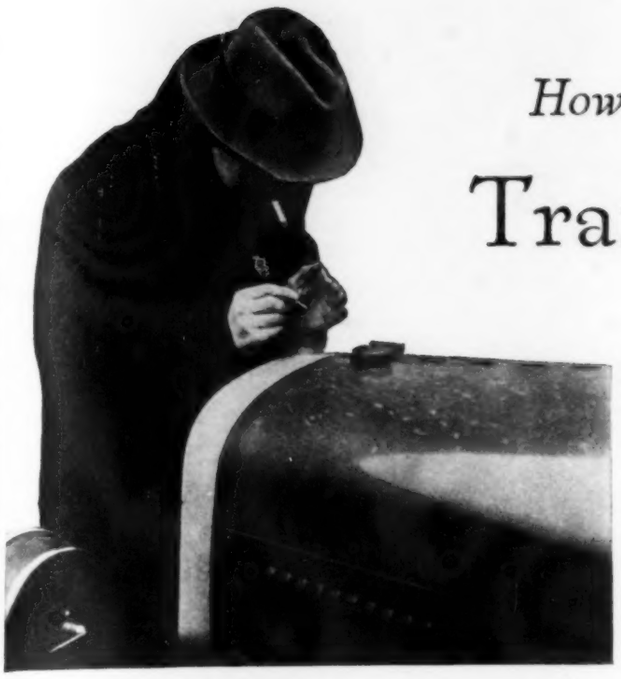
Baked Apple
Farina — Cream — Sugar
Shirred Eggs — Crisp Bacon
Bread — Butter
Coffee
Nourishment at 10 a. m.—Milk

*Dinner*

Consommé — Crackers
Roast Beef
Potato Puffs — Carrots and Peas in Butter
Apple and Nut Salad
Bread — Butter
Vanilla Ice Cream
Nourishment at 4 p. m.—Orange Juice

*Supper*

Rice — Sugar — Cream
Eggs (Soft Boiled) — Escalloped Potatoes
Pineapple Salad
Roll — Butter
Strawberry Junket
Nourishment at 8 p. m.—Hot Chocolate



*A flashlight costs less than a funeral.*

*How You Can Help to Prevent*

# Traffic Accidents

*By*
*A. A. Mowbray*

## Each Day 2,000 Persons Are Hurt by Motor Cars

MARK TWAIN once remarked that although everybody complained about the weather, nobody did anything about it. Of course, nobody can do anything to change the weather. Thinking people, however, instead of spending valuable time deploring the heat, the cold or the rain take precautions to safeguard themselves accordingly. Those who want to keep well refrain from overexertion during the summer, dress appropriately for each season and see to it that if they get wet during a storm there will be no serious aftermath.

Today the whole country is concerned over the traffic problem, but few people are doing much about it. The newspapers print daily reports of accidents but fail to point out how they could have been avoided.

Fortunately, however, the traffic problem is now receiving the serious consideration of President Coolidge, governors of the various states and the mayors, chiefs of police and safety directors of scores of cities.

The man on the street has yet to realize that he himself carries one of the keys to the problem. He must look to municipal and state authorities for engineering and regulation innovations that will do much to lower the traffic toll, but almost, if not fully, as important are the parts that the pedestrian and motorist play. All the engineering improvements and traffic rules in the world will not prevent accidents unless the citizen does his share by being careful of both himself and the other fellow. He must heed traffic signals and he must respect the regulations that are drafted to protect the public.

A city can have ideal streets for motoring. It can boast of a perfect system of traffic signals. The officers stationed at busy intersections can be courteous, diligent and noted for catering to aged and infirm pedestrians and children. But all these protective devices and methods mean little if, after a wild party at some roadhouse, an automobile filled with joyriders and with a drunken driver at the wheel comes speeding along and strikes down your mother or my boy.

*The ever familiar road hog. No street is wide enough for him. He wants to monopolize all of it.*

Automobile manufacturers are producing machines that boast of all kinds of safety appliances, but everything deteriorates if not

given constant attention, and many deaths have been traced to brakes that needed adjusting or relining.

Every day in the year approximately 2,000 persons are injured by automobiles. More than sixty persons are killed daily as a result of traffic accidents. The most lamentable fact is that about one third of the victims are boys and girls under 15 years of age. The economic waste attendant on these casualties is estimated at one billion dollars yearly.

"Too bad," you sympathize, "but accidents will happen."

Did you ever stop to think that accidents do not just happen but are caused and can be prevented?

Accidental death can be avoided, almost 99 times out of 100, just as can disease, illness and unemployment. As a result of scientific preventive measures, certain diseases have been practically eliminated. Epidemics that once took a toll of thousands of lives in the United States today are practically unknown.

*Industry Is Conquering Accident Problem*

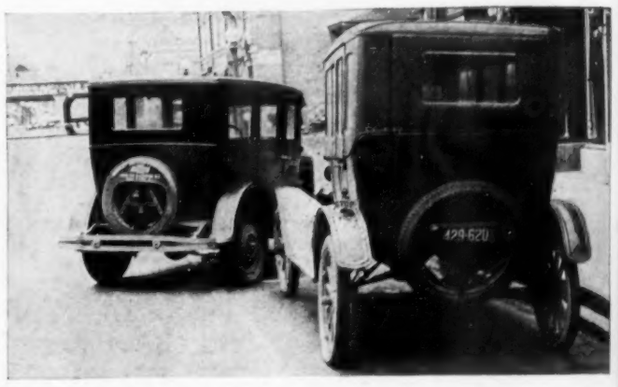
Not so long ago accidents in factories, workshops and industrial establishments were regarded as being lamentable things that "happened." But during the last twenty years employers have demonstrated conclusively that these accidents can be checked, and today hundreds of employers are conducting their operations for months and even years without a single accidental death or serious injury.

Corporations, firms and individuals employing large numbers of people determined to study the causes of industrial accidents and, when they ascertained the reasons for them, they installed safety appliances, devices and educational methods with gratifying results. True, today thousands of men continue to be injured in industry, but that is largely because systematic accident prevention work has not been made an integral part of business operation.

In the majority of motor accidents, it is the pedestrian that is injured. The automobile driver is comparatively safe, except when his machine crashes into another motor vehicle, street car or pole; is struck while crossing a railroad track or goes over an embankment. Some people think that because they are free-born Americans they have every right in the world to operate a car, not appreciating the fact that driving a machine is a privilege instead of a right. Not every one should be allowed to drive an automobile.

Some drivers, because they have demonstrated that they are skilful operators, feel they have a right to speed. But the most expert motorist in the world cannot always stop his car quickly enough to prevent striking a child who has suddenly darted into the street, to avoid crashing into another machine that has

*Don't park in front of a hydrant.*



*What is wrong in this picture?*

*Be especially careful when making turns.*

*Never pass a street car on the left.*

*Don't be too much interested in the scenery.*

*Drive slowly and blow the horn when coming out of alleys.*

*Stop the engine when having the gas tank filled.*

unexpectedly turned a blind curve or to avert knocking down a timid woman who becomes frightened when she sees a speeding motor car approach.

Too many motorists feel that they own the streets and that it is up to pedestrians to take care of themselves. Too many drivers try to blow people out of their paths.

Numerous cities today are demonstrating the fact that traffic accidents can be reduced. Surveys made by engineers employed by the National Safety Council have revealed the causes and preventives of street and highway fatalities. Those cities that are employing modern methods to prevent automobile crashes are rejoicing over fewer casualties. Three steps are absolutely essential in a campaign against these accidents; namely, (1) engineering revision of streets; (2) regulation of traffic and enforcement of traffic laws, and (3) education of motorists and pedestrians.

### *How the Three Remedies May Be Worked Out*

These three remedies are considered by the National Safety Council to be the outstanding planks in a platform for community safety. The council, which is a nonprofit making, nonpartisan, cooperative organization, has affiliated branches located in seventy cities throughout the country. These community safety councils and the parent organization are cooperating with chambers of commerce, motor clubs, boards of trade, parent-teacher associations, luncheon clubs, state motor vehicle commissioners, chiefs of police, traffic officers and other municipal authorities in endeavoring to impress on the public the importance of making the necessary engineering revision of streets, of having proper traffic signals and of regulating motorists and pedestrians.

The safety organizations are clearing houses of information. Engineers study the causes responsible, for some cities have few accidents while other communities of the same size have a much higher rate. Statisticians obtain, compile and digest monthly accident reports received from chiefs of police in more than 100 American cities and return to them comprehensive tabulations showing how, when, where and why accidents occur. More than 1,000 volunteer committeemen serve on the various committees without financial compensation. Public spirited citizens and corporations contribute hundreds of thousands of dollars annually toward the spread of educational literature designed to protect the public while at work, while on the streets and highways, in other public places and at home.

In communities in which there is no organized safety effort, the National Safety Council distributes literature dwelling on the importance of these three important features, which are so

essential for an organized campaign of public safety.

If a city is giving consideration to these three essentials in a continuous campaign against accidents on streets and highways, citizens are less likely to be injured than if the town is doing little besides regretting the growth of automobile accidents.

The child between 5 and 9 years of age is facing the most dangerous period of his life so far as being injured on the streets is concerned. The person over 55 years of age is in greater danger of being struck by a vehicle than is a younger person.

Statistics show that traffic accidents are most frequent between 5 and 7 p. m. Therefore, a person should be especially careful on his way home from work.

*Although the owner of the car in the rear had plenty of room in which to park, he insisted on crowding the machine in front, instead of allowing the other fellow space in which to back up, if necessary.*

More than half of all traffic accidents take place at street intersections. Of the injuries to pedestrians, however, about 60 per cent occur between intersections.

Cemeteries are filled with drivers who contested the right of way. Therefore, the driver should let the other fellow go first, if he wants to play safe.

Trying to pass street cars without being sure that the motorman was going to wait a few seconds, without being sure that no trolley was approaching on the other track or without being certain whether the car was going to proceed straight ahead or turn—this is a mistake that has resulted in many automobile crashes.

Driving on the wrong side of the road has resulted in hundreds of automobile accidents.

Exceeding the speed limit has been the cause of many fatal accidents.

Motorists who have driven through safety zones have injured numerous people.

Everybody can help to reduce accidents. These are some of the means:

If you drive a car, you can take the subject of accident prevention to your motor club and find the secretary willing to cooperate with you in having the subject of public safety discussed at a meeting of the members, if the organization has not already launched an educational campaign.

If you are a clergyman, you can take the subject into the pulpit.

If you are a teacher, you can interest your principal in having safety methods taught in the school.

If you are a writer, you can dip your pen into a potent solution of facts and human sympathy.

If you are a father, you can teach your children the importance of always being careful.

If you are a mother and belong to a parent-teacher association, you can arrange to have safety discussed at some session.

If you belong to a chamber of commerce, luncheon club, fraternal order or board of trade, you can interest that organization in participating in a community safety campaign.

If there is a community safety council in your city, you can join and participate in its activities.

If there is no community safety council in your town, you can bring up the question of the advisability of either organizing one or having some association conduct a campaign.

# The Kalaw of Burma

*By James A. Tobey*

WHERE the jungle grows deepest and darkest in northern Burma, the kalaw is found. None but the people of the forest know where it is or when to seek it. Once in three years the tajee, the headman, leads his men folk from the peaceful village into the wild in search of this precious living thing. They who go in quest of the kalaw must go warily or the hunter becomes the hunted, for the tiger hides in the wanue and panthers and other predatory things are lurking there. But the prize is worth the toil and the goal is worth the danger, for the kalaw is to the native of the East the giver of life itself. From the seeds of this stately tree of Burma comes the oil that is today the only known cure of the dread leprosy.

This kalaw is a majestic tree, which grows tall and straight in the sandy soil along the borders of such streams as the Khodan and its branches above Khoung Kyew. The trunks are erect, sometimes reaching a height of 50 or 60 feet; they have projecting branches, drooping somewhat, so that in appearance there is a resemblance to the fir. At the ends are the fruits, round, fawn colored, the size of an orange, and with velvety skin. In Burma these fruits are called kalawthee. They are produced irregularly, a heavy crop usually being followed by two years of poor crops, a characteristic that contributes to the scarcity of these fruits in the bazaars.

*By Cowling, from Ewing Galloway*

***Dr. Rock traveled the road to Mandalay, and far beyond.***

The oil distilled from the seeds of the true kalaw is known as chaulmoogra oil. Its therapeutic properties have been recognized by the Burmese for many centuries, though it is only recently that scientists have discovered how to use it efficaciously for leprosy.

Experiments at the University of Hawaii in 1918 revealed the methods for breaking down the oil into its constituents and physicians at the leprosy receiving station at Kalihi have demonstrated that certain of these organic compounds when injected intramuscularly will, in the course of time, cure many cases of this dread disease. For several years encouraging reports of lepers discharged as cured have been coming from Hawaii. This is a novelty in medical science, for previously there had been no known cure for this malady. To be sure, chaulmoogra oil had been employed by the Burmese and other peoples of the East, but in all the centuries it had been a palliative only and not a cure.

The antiquity of the use of the kalaw in the treatment of disease is indicated by an ancient legend. It is written in the Mahawin, the story of which goes back into forgotten years, that a king was the discoverer of the beneficial effects of this tall tree of Burma. He was Rama, mighty ruler of Benares, whose reign was even before the days of Buddha. Though a great king he was sorely afflicted and none of the royal phy-

sicians could heal his leprosy. In despair he went alone to live in the jungle. His palace was in the hollow of a kalaw tree and its fruit was his sustenance; in it he found health again.

As he sat by his home in the kalaw tree, Rama one day heard an agonizing cry from the jungle. It was the terrified scream of a woman. The king searched until he came upon a cave. He shouted, "Who lives in this cave?" and a voice answered, "It is Piya, daughter of Ok-sa-ga-rit." Now Rama was a great king, but the father of Piya was greater and ruled a vast realm to the north of Benares. He bade her come out but Piya refused, for, she said, she was a leper. Rama, nevertheless, forced his way into the cave and carried Piya to his palace in the hollow tree. There he made her eat of the leaves and the fruit of the kalaw. Soon she was cured and Rama took unto himself Piya for a wife. Sixteen times did she bear him twins, says the legend.

A hunter came one day to this forest and recognized Rama as the former king of Benares and heard his story. The hunter returned in haste to the capital and narrated the tale to the son of Rama, who then ruled in his stead. In great pomp came the king to the jungle and invited his father to accompany him back to Benares. But Rama refused and instead founded a city at that place and called it Kalanagara, which means the spot where once grew the kalaw trees. This is the legend as written long, long ago in the ancient Mahawin.

### *The Newer Quest*

There is a newer story of the quest of the kalaw and it goes back only half a dozen years. When the discovery was made that the fatty acids of chaulmoogra oil were specific in the treatment of leprosy, the practical problem of getting the seeds to make this oil presented itself. The kalaw might grow in Burma or in Bengal, in Assam or in Siam. The seeds could sometimes be purchased in the bazaars of India, but no sahib had ever seen the trees from which they had been collected. Even the native dealers had to depend for their supplies on indolent natives, some of whom demanded and obtained their pay for the precious seeds two years in advance. Moreover, at least half of every infrequent crop was lost or wasted. If, therefore, chaulmoogra oil was to become the panacea for a widespread disease, the kalaw must be found and, if possible, cultivated.

In order to locate this phantom tree, the U. S. Department of Agriculture sent from its bureau of plant industry an agricultural explorer, whose business it is to travel the world over in search of rare plants. This scientific wanderer was Dr. Joseph Rock, who traveled many months in Burma and other portions of the East on the trail of *Taraktogenos kurzii*, which is the botanical name for the kalaw.

There were many false clues, for other trees resemble the kalaw closely and some of them yield an oil similar to chaulmoogra. The real species has different names in different places. The kalaw of Burma is the lemtam of Assam and the chaulmoogra of Hindi and Bengali. Some of the closely allied types are also called kalaw in Burma.

That Dr. Rock was successful is shown by the fact that for five years or so the kalaw has been growing in the gardens of Kalihi, which is the receiving station for the leper settlement on the Island of Molokai, Hawaii. The trees have not yet produced fruit, for that requires seven years, but they give every indication that they will. Once established these Hawaiian trees will prove of inestimable benefit in the war on leprosy and, it is to be hoped, in the eventual conquest of the disease.

Dr. Rock forwarded seeds to Manila, Singapore and Washington, as well as to Honolulu. They grew in the former places but failed to survive in Washington. The narrative of the travels of Dr. Rock is a fascinating one and has been presented in somewhat technical form in one of the bulletins of the Department of Agriculture.

### *Route Followed by Dr. Rock*

This botanical Magellan had visited Bangkok in 1919 while en route to Singapore and Java and had made inquiry regarding one of the trees that was reputed to produce chaulmoogra oil, but without notable results. In 1920 he again visited Siam and from there proceeded to Burma. In the Martaban hills he first found one of a species known as *Hydnocarpus castanea*, closely related to the kalaw and called by that name by the natives. One of the trees in the group furnished 170 mature fruits, each containing from twenty to thirty large angular seeds. The object of the search was, however, to locate *Taraktogenos kurzii* and so Dr. Rock instituted further inquiries at Rangoon concerning this apparently elusive tree. There he was advised to go to the Chindwin district near Mawlaik. That is just beyond the road to Mandalay.

From Mawlaik Dr. Rock had to proceed by dugout down the Chindwin River to Kyaing and then penetrate the tiger-infested forests, dense and forbidding in appearance, for many miles further. Stops were made at Nansouksouk, Thoung Dwin and Khoung Kyew, none of which the railroad has reached as yet.

Finally, after many disappointments and failures and following innumerable hardships and difficulties, the explorer was rewarded by coming upon an entire grove of kalaw trees. It was situated 5 miles from Kyokta, a lonely jungle village. During the trip a tiger kept the party company for two days, but refrained from making himself obnoxious, though he did

pay a call at Kyokta, killing three women and a child. Such is the life of an agricultural explorer.

After a short excursion into the Dibru forests in Assam, where an inspection was made of the lemtam, Dr. Rock visited Chittagong in lower Bengal. From the Kassalong forest reserve in this district, a two weeks' journey from Chittagong, come most of the seeds that find their way into the markets of India. The region is filled with every kind of wild animal, and the dealers meet with great difficulty in inducing the natives to risk their lives in collecting the seeds. Conditions such as these make possible the native demands for two years' wages in advance.

Ewing Galloway

*Dak bungalows, built by the British to shelter travelers in Burma.*

The fruit matures during the rainy season, which lasts from May to September. When it is ripe or when plucked by the ubiquitous monkey, the fruit falls to the ground. There it may be consumed by roving wild bears, which have a fondness for this delicacy, or it may be lost or washed away by the swollen streams. The few seeds that remain after these several vicissitudes are garnered by the natives; that is, by the few who have courage to risk meeting the denizens of the jungle with carnivorous appetites. It is lucky if half the crop is salvaged.

### *Must Follow Dry Beds of Streams*

The tree itself is usually found growing in the sandy soil along the banks of streams. The growth in these forests is dense, not only with the kalaw, but with bamboo, palm and many other trees, and with thick underbrush. As a consequence, the groves can be approached only by way of the dry beds of streams. The creeks are deep, as the water cuts easily through the sand. When full, they are replete with fish, which are, however, shunned by the natives, as these fish eat the seeds and the consumption of fresh kalaw seeds has a disastrous effect on the human digestion. During the fruiting season the natives abstain from pork, as wild pigs are also fond of these seeds.

The seeds are rarely used in their natural form in the East, but the oil is extracted from them. As carried on in India, this is a fairly simple process. When the seeds arrive at the warehouse of the dealer in chaulmoogra oil, they are first carefully washed and then dried in the sun for a day or two. Coolie women shell the seeds, after which they are crushed between rollers and placed in jute bags, which are pressed between steel plates so that the oil is forced out. It is collected and filtered through ordinary blotting paper and is then supposed to be ready for use. The remaining press cake is sold to tea planters and paddy-field owners as manure, although this product regarded as waste still contains much of the valuable oil. The fractionation of chaulmoogra oil in order to obtain the acids and esters that are scientifically used in the treatment of leprosy is not so simple a matter; it involves a skilful chemical technic.

### *May Bring Relief to Millions*

Although leprosy is rarely seen in the United States, it is a widespread disease throughout the world and especially in the Orient. It is difficult to say just how much of it there is, estimates varying from one to five million cases. In China and India, where the disease is particularly prevalent, no reasonable computations as to the amount can be made. The disease is caused by a germ, which was first isolated in 1874, but to this day the exact methods of its spread have not been determined. Isolation of the leprous, as practiced at Culion in the Philippines, for instance, seems to be an efficacious means of preventing the dissemination of the disease.

Until the ethyl esters of chaulmoogra oil were developed there was no successful cure for the malady. At Culion, which is the world's largest and most efficient leper colony, excellent results have been achieved by the hypodermic use of these derivatives of the chaulmoogra oil. Of more than 3,000 cases under regular treatment there, some 750 were reported in 1925 as having been benefited by this method and of this number nearly 200 had been discharged as cured. Similar results have been obtained in Hawaii at the leper station at Molokai.

HYGEIA
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# *Plain Facts about Health and Disease*

## HEALTH NEWS OF THE MONTH

**Suicide in California**

For some reason the suicide rate in California is double that of the country as a whole. The director of the bureau of vital statistics of the state points out that there has been no satisfactory explanation why 32 out of 100,000 people in California commit suicide every year as compared with 15 for the rest of the country. In a period of three years 2,600 people committed suicide in California. When the rates were studied it was found that natives of California committed suicide at a rate of 15 per 100,000 persons; people from other states and living in California at a rate of 24, and foreign born persons in California at a rate of 35. People who commit suicide do so because of financial reverses, disappointment in love, ill health, fear of disgrace, fear of other misadventures and insanity.

Dr. Ross, director of the bureau, believes that many of the California suicides are the result of ill health, since that state has for many years been a mecca for sufferers with various chronic diseases. Financial reverses may be prominent, since many of these persons go to California without funds and find it just as difficult to secure a livelihood in that state as in the ones from which they migrated. Temperament apparently has much to do with the matter. An eminent psychologist pointed out that an Italian will commit murder in circumstances in which a Scandinavian commits suicide. Investigation indicates that the person who commits suicide is, at least for the time being, the subject of extremely illogical reasoning power.

The prevention of suicide in the individual would seem to lie in vast social and economic adjustments, which are equally steps in the prevention of most of the ailments by which mankind as a whole is distressed.

**Railway Coaches for the Sick**

The railway company operating between Paris and Lyons in France has recently supplied a special type of car for the transportation of the sick, since it carries annually thousands of convalescents, particularly tuberculosis patients, to the resorts along the Riviera. In the new coaches each patient is furnished with an individual room, lavatory and toilet. Provision is made also for another bed, transformable into a couch, which is used by the person who travels with the invalid.

Projections that may catch dust are avoided. Walls, ceiling and floor consist of washable material. The long side of the room is made with a double door to permit the carrying in and out of the patient in a recumbent position. Lighting fixtures as well as windows that make possible any amount of illumination are provided. The temperature is easily regulated and ventilation suitably controlled. Toilets are provided with hermetically sealed receptacles to prevent contamination of the roadbed, and the service room is supplied with hot and cold water, an icebox, a water-bath, an electric heater, an electric chafing dish and an air-tight receptacle for soiled linen.

Such attention to the requirements of the sick is bound to yield beneficial results.

**The Age of the Cave Man**

Apparently there have been men on earth at least as long as 500,000 years. These facts are attested by the finding of relics in the forms of bones and other material, as well as by the observations made by geologists and paleontologists. The cave man kept no statistics. It is doubtful whether the earliest man had any language with which to express his thoughts or with which to record them in any manner. Modern man has learned the value of vital statistics, and in most of the

states of our country records of birth, of life, of illness and of death are accurately and legally recorded. Thus it has been shown that the life expectancy of a child born 100 years ago in the United States was little more than thirty to thirty-five years, whereas the child of today may reasonably expect to live fifty-five years.

Prof. T. W. Todd of the department of anatomy of Western Reserve University has examined the skeletons of ancient men. Modern studies have established the fact that the epiphyses of the bones join during the period from adolescence until the age of 25 years. From 25 to 30 years the sutures or borders of the flat bones close completely, and after 35 years illnesses and various other changes aid differentiation. According to Todd, all the evidence available indicates that ancient man seldom lived beyond the age of 30 years. There were, of course, occasional patriarchs, perhaps exemplified by the legend of Methuselah, but the majority of men died young.

It is interesting to know also that not all classes of people had the same mortality rates. In the lower strata of society death was usually at an earlier age than among the upper and better protected classes. In the same way today, people who do not belong to the sheltered groups live briefer lives than those of wealth and high political estate.

**The Effects of Physical Training**

Investigators in the department of biology of Wesleyan University in Connecticut have been making some studies to find out what advantages the man with physical training has over the one who does not undertake a systematic regimen of exercise. Dr. Schneider and the colleagues who aided him in his investigations found that the trained man can perform a given amount of work with a smaller consumption of oxygen than is used by an untrained man, and that, therefore, there is a smaller demand on his heart.

The studies were made on one athlete and on four men who had been irregular in the matter of exercise and who had led sedentary lives. With the beginning of the training period each of these men spent at least one hour every day in some form of vigorous physical exercise. The trained man ordinarily breathes more slowly and more deeply than does the untrained man, and his heart beats less frequently. The investigators found that systematic training does not produce constant changes in the blood pressure. It does, however, produce a decline in the basal metabolism, which has to do with the manner in which the body conducts the handling of oxygen. These observations may be interpreted as showing scientifically the advantages of systematic exercise. The persons who were studied felt better and were more alert than during their previous existence; appetite was improved, muscles were somewhat developed and there was an increased capacity for doing physical work. Physical training means therefore an increase of the efficiency with which the chemical and physical processes of life are carried on. M. F.

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## COMBATING THE MOSQUITO

IT HAS long been known that malaria may be combated by controlling the mosquito that transmits the disease from the sick person to the well one. Among the means of controlling mosquito growth is the draining of ponds and marshes in which the mosquitoes propagate, the pouring of crude oil over the surfaces of such ponds, since the mosquito larvae cannot develop in the absence of air, or the stocking of ponds with a variety of fish that will destroy the larvae of the mosquito. Coincidentally, of course, it is necessary to treat patients with malaria so as to relieve them of the disease and to remove the organisms from their blood.

Unfortunately our rural population in general has not yet taken advantage of this modern knowledge to gain freedom from malaria and the mosquito. In southern Illinois a determined campaign is now being staged by the Illinois department of public health to overcome the present unsatisfactory conditions. In a report on the subject J. Lyell Clarke, assistant sanitary engineer of the state department of public health, points out that malaria averages three cases per hundred persons in the hill territory, and fifteen per hundred persons in the river valleys and creek bottoms. There are, of course, many small communities in the hill territory with a higher or lower malarial incidence.

More than twenty varieties of the 135 different kinds of mosquitoes that exist in the United States have been found in Illinois. The kind that transmits malaria breeds in ponds and lakes and is therefore an especially frequent visitor to summer resorts. This type of mosquito bites most frequently at dusk, at the time when resorts are crowded with people. Since it is impractical to drain the ponds at summer resorts and country clubs or to cover them suitably with a layer of crude oil, the method recommended by Mr. Clarke is the use of fish that eat the mosquito larvae.

The edges of the pond are first cleared of willows, cattails, water grasses and floatage. This leaves a sharp, clean bank so that the fish can swim close to it. The species used for the purpose is the top minnow, also called the pot-bellied minnow. Fish hatcheries of the state are now prepared to ship such minnows to any district in the state that is willing to cooperate in the mosquito elimination activities. M. F.

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## THE MISTAKES OF McCOY

OF ALL the preposterous bilge offered in the name of scientific advice to the eager consumers of health information in the public press, nothing exceeds that of one Frank McCoy in its utter departure from fact and reason.

A few months ago HYGEIA traced the heredity of this so-called health column and of its "physculpractic" father. Educated—if the word can be so misused—in chiropractic, this McCoy proffers his advice to the public primarily in matters of diet. He has written a book—and books do not care who writes them—entitled "The Fast Way to Health," a title reminiscent somehow of that famous paper-covered classic of an earlier day called "The Road to Ruin."

In the promotion of his health column "Physculpractor" McCoy has been aided greatly by the publisher of the Vancouver *Sun*, one R. J. Cromie, and by full page advertisements as well as smaller ones in *The Editor and Publisher*, a trade journal of the newspaper industry. Certainly the editors, if not the advertising department, of the last named periodical ought to be more interested in protecting the newspapers they serve than in the collection of returns from featuring such piffle as the McCoy columns. In the advertising matter as well as in the letters sent out by Cromie, editors are cajoled by promises of circulation boosts to take the McCoy column and to promote the McCoy free lectures. True, the lectures are sensational; so is murder and the diary of Mrs. Ruth Snyder or Peaches Browning.

It has been recorded that there are editors willing to permit falsification, the stealing of pictures, imposture and many minor crimes against good taste if not against the law, to satiate the appetites of a sensation-seeking public and thus to build circulation. But when editors offer dangerous advice regarding the care of the human body to promote circulation of their newspapers they are trifling with human lives; they approach dangerously near to connivance at the creation of epidemic and the occurrence of unwarranted deaths.

Elsewhere in this issue appears a careful analysis of some of the hogwash perpetrated in McCoy's "The Fast Way to Health." Full page advertisements for this book have appeared in a few reputable newspapers and periodicals but have been rejected by many others. Obviously the advertisement of the book may be to some extent a come-on for the health column and the lectures. The column has appeared in the Oakland *Tribune*, the Toronto *Telegram*, and the St. Louis *Star* and in several other newspapers, sometimes promptly discontinued after a brief trial.

Any editor who cared enough about the truth to inquire could, with but little difficulty, find out how far from scientifically established truth are most of the premises and the advice based thereon in "The Fast Way to Health." The article in this issue covers only a few of the worst errors in the book; the columns are replete with the same fallacies and multiply the dose daily.

According to McCoy's advertisements, E. W. Howe, B. C. Forbes, Brig. Gen. Odlum and Babe Ruth are convinced that McCoy's book is sensible; but what do they know about the cure of "heart derangement," "prolapsus of organs," "liver trouble" or "Ears (chronic discharge from)" by the McCoy methods. Does Mr. Ed. Howe think that fasting, if indulged in for from ten days to two weeks, will cause a cancer to come away from the lip? If not, maybe Mr. Babe Ruth can convince him!

Journalism in this country is seeking the status of an honorable profession. Editors in convention listen to dignified reports of committees on ethics and hear addresses inspiring them to higher ideals. The *Editor and Publisher* aided materially in preventing the dissemination of free publicity for the notorious Koch of Detroit and his cancer cure. But it accepts the paid advertisements for the equally dangerous advice of McCoy and fails in giving advice to its readers as to his actual standing. Some day its editor and its publishers may feel very much ashamed of their share in advancing the fortunes of "Physculpractor" McCoy. M. F.

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## SUMMER TIME IS FLY TIME

FLIES are a nuisance. They are a dangerous nuisance, in that they may spread disease by the carrying of bacteria from a sick person to a well one. The digestive juices of the fly are a favorable medium for the development of the germs of tuberculosis. Many germs attached to the fly die before it can transfer them to a place favorable for their future growth. Never-

theless, they are a menace and are disturbers of comfort and should be eliminated.

The fly is disgusting. It is born in manure and filth. It eats anything. It flies from the cesspool and the garbage can to the hospital and the morgue and then perhaps into the home. When a fly bites, one may know it is not an ordinary house fly but a stable fly. In rainy weather and in the presence of high humidity, the stable fly is not infrequently seen in the home. The common house fly cannot bite, because its mouth parts are constructed for liquids only.

Entrance of the fly into the house may be prevented by screening doors and windows. A suitable disposal of refuse prevents the fly from finding a place for breeding. Sticky fly paper, poisoned paper and fly traps catch the fly and dispose of his activities. Fly swatters properly manipulated remove the pest and afford amusement to children.

In order to get results with an indifferent public, "swat the fly" campaigns, "fly weeks," "fly days" and other attempts to destroy flies on a wholesale basis have been initiated. Then a phlegmatic and ignorant populace is stirred briefly into a moral frenzy against the fly and wonders are accomplished. The intelligent man does not need to be urged repeatedly to eliminate the fly from his surroundings. With him, the fly campaign is a matter of eternal vigilance.

M. F.

## ICE IN SUMMER

AMERICANS eat more ice and drink more ice water than any other people in the world. Some of the health problems of summer are associated with the proper care of this refrigerative material. Ice is sometimes made of water that is contaminated. When this type of ice is chopped up and put into water or other drinks it is possible for it to contaminate them, since germs may live varying periods in ice.

Ice is expensive even under the best of circumstances. It should therefore not be left lying around until it is warmed nearly to the melting point before it is put into the refrigerator. When it is once placed in the refrigerator it may be covered with a suitable covering. If the ice is too thoroughly covered, however, it will not keep the temperature of the food in the ice box low enough to check decomposition, since it keeps things cool by the absorption of heat.

Modern artificial refrigeration includes an apparatus for preparing cubes of ice, which find a ready use in the family household. The importance of using pure water for the preparation of such ice must be emphasized for the family ice box as well as for the manufacturers of ice who produce it on a large scale. M. F.

## SHELTERED EMPLOYMENT FOR THE TUBERCULOUS

THE National Tuberculosis Association, at 370 Seventh Avenue, New York City, has just issued a bulletin by Drs. H. A. Pattison and Philip P. Jacobs on "Sheltered Employment for the Tuberculous in the United States."

The patient with tuberculosis who leaves the sanatorium is presented with the difficulty of securing an occupation for which he is especially fitted and which will not lead him to a relapse. Sometimes the very consideration of the problems confronting him arouses nervous anxiety, worry and similar mental troubles. In the sanatorium he has led a life of rest, which has been largely instrumental in bringing about his recovery. When he leaves he at once faces anxieties relative to hours, wages and other conditions that are inevitably associated with employment. The patient may feel that any work will cause him difficulty; on the other hand he may feel that his cure has been complete and he may extend himself to the utmost.

The first problem is the one of adjustment to the environment of daily life; the second problem is the choice of an occupation. The patient must determine first whether he will return to his old employment; second, whether it is necessary for him to provide a living for himself and his family; third, whether he must lay by funds toward a future in which there may be a relapse (sometimes the old occupation has itself been associated with working conditions unfavorable to a life without tuberculosis); fourth, whether he need obtain a position in which he may have medical supervision. He must have regular medical advice not only as to the kind of work to do but as to how the work affects him after he begins it.

In the bulletin just issued by the National Tuberculosis Association numerous experiments in providing suitable work for persons with tuberculosis are described and the results analyzed in relation to the subsequent life of the persons concerned. It must be recognized that these are not normal workers and that they must be employed in situations in which they can be individualized. When conditions of salaried employment are established for them, the economic, social and physical results appear to be advantageous even beyond the imagination of the most enthusiastic proponents of rehabilitation schemes. M. F.

Ther
Health Puzzle
Find the following vegetables which grow on the farm and which help to make boys and girls healthy: a potato, an onion and a carrot.

*When they forgot to be cheerful, Elephant reminded them of the lesson they had learned down by the sea.*

# On the Banks of the River Jing

*A Children's Story Written and Illustrated by*

*Elizabeth Blaine Jenkins*

ALONG the banks of the River Jing it was hot and still. Not one creature squeaked or squawked or growled or hissed in all the jungle. The tall bamboo rattled its long leaves and shook them in the wind. The wind hurled them into the earth, where they stuck upright like javelins. The jungle folk were having their afternoon nap, so they did not say a word.

Suddenly there was a little gurgle, and hippopotamus peeped up through a heap of driftwood at the edge of the River Jing. Big fat Hippo snorted angrily, so that he awakened every one on the banks of Jing.

He bellowed: "I ate four bushels of juicy roots, which I dug in the marshes. I ate two bushels of grain. My dinner is not happy and I feel as cross as two sticks on the Jing-Jang-Jing."

Parrot was sitting on a limb in the rubber tree and when he heard what Hippo said he ruffled up his feathers crossly and squawked:

"Do cover up your ugly, slippery, shiny nose in the muddy Jing. You give me the fidgets when you snort during my nap time. When I get the fidgets they give me indigestion at once!" When Parrot said that, Hippo filled his huge lungs with air and dived to the bottom of the muddy Jing, because he was too cross to try to be pleasant at all.

Old man Giraffe was nibbling the tender shoots of a vine on the rubber tree. He snorted quite as angrily as Hippo: "Every time Parrot talks he struts up and down and wiggles my dinner on the vine. I do wish he would talk without making such a squawk of it."

*Hippo*

Now little Diana Monkey with a crescent on her forehead was trying to walk from the rubber tree to a tall palm on the bridge of little green vines, but Giraffe and Parrot were snorting and squawking at each other so she couldn't pass over. She squealed angrily:

"Get off my bridge of vines. How can I go about my business while you two jiggle me up and down and into the bamboo? If I fall into the bamboo, the hissing folk get angry and stick out their forked tongues at me."

Elephant was standing in the tall bamboo, and he was so very still that he looked just like the shadow of a big cacao tree. He began to curl and uncurl his trunk discontentedly and to switch his queer little tail. He roared furiously:

"If you jungle folk do not stop disturbing my afternoon nap I shall fill my trunk with Jing water and squirt a shower bath on you, hide, hair and feathers!"

Just then Hippo's slippery nose came poking through the driftwood again and he opened his wide mouth and ha-ha'd in the most aggravating manner.

This made Elephant so very angry that he walked into the Jing and jabbed Hippo's tummy with his tusk, roaring:

"You are an ugly pachyderm animal belonging to a stupid family of quadrupeds, and I will toss you over the cacao tree!"

This made Parrot and Diana Monk and Hippo snort again, because Elephant is a pachyderm himself.

By this time each one was so cross that he was ready to eat the other one up. There was not one cheerful

creature on the banks of the Jing. They squawked and squealed and snorted and trumpeted, until it began to look as if some one would lose a tail, an ear, a pinch of his hide or his feathers.

Not far away Mother Ostrich was sitting in a big nest of hot sand. Her queer, tall babies were trying to go to sleep, so she quacked:

"For goodness' sake, stop making so much noise! I want to sing my twenty babies to sleep."

Every one thought it would be amusing to hear Mother Ostrich sing, so they stopped quarreling with each other and sat down haunch by haunch and beak by jowl and listened to this song:

Whad-Da-Ya-Think is in the sea,
In the sea, in the sea,
Happy as happy as happy can be,
My little dearie dumplings?

As soon as Parrot, Diana Monk, Hippo, Giraffe and Elephant heard this song, they thought this same thing at the same time:

"At last we have heard of something pleasant and happy. If this Whad-Da-Ya-Think person is as happy as all that, I should like to know how he gets happy and stays that way all day long. I feel as cross as two sticks on the Jing-Jang-Jing, and when I feel unhappy I always have indigestion. Then I get a quirk in my nerves and somebody loses a tail, an ear, a pinch of his hide or his feathers."

Parrot spoke up and said: "Let's go down the Jing to the big blue sea and ask Whad-Da-Ya-Think all about it."

Monkey hung upside down by her tail and chittered: "That is the best idea I have heard for a whole month of jungle moons. I shall start at once. I shall trot along my vine bridges and leap from limb to limb until I reach the deep blue sea."

Parrot squawked: "I shall flip-flop my wings and fly down."

Hippo snorted: "I shall dive down deep in the Jing and paddle along until I reach the sea."

Elephant trumpeted: "I shall gallop along and trample the tall cane. I shall tear down the trees that try to keep me from following the Jing to the sea."

Giraffe snorted: "Well, let's be off and not keep snorting, trumpeting and squawking so much about it!"

Ostrich quacked: "Don't be in such a hurry. Wait until I sing the second verse."

The jungle folk would not listen to a word that Mother Ostrich said. They started one by one to swim, trot and gallop along the banks of Jing down to the wide blue sea.

They saw queer birds and strange beasts in the shadows of the jungle. They saw creatures with spots and creatures with stripes and silky-haired ones with no marks on their black fur. They saw birds with large beaks and crawling folk with bumpy hides, and they sniffed at the prints of queer creatures in the white sand. They sniffed, and wondered, and followed their noses on and on, until the sun sank into the fringe of the black forests and the night came down. At last they came to the wide blue sea.

They looked up and down and all around and said: "Now, where shall we find that happy creature, Whad-Da-Ya-Think?"

When they looked up they saw a thousand stars winking in the black night. When they looked down they saw the cool wet sand. When they looked around they saw great heaps of rock, upon which the giant crabs crawled and beckoned with their long arms. They saw the palms looking at their shadows in the sea, but they saw no one at all that looked as if his name might be Whad-Da-Ya-Think.

Just then Elephant had a bright idea, and he said: "Let's all sing Ostrich's song. If Whad-Da-Ya-Call-Him hears the song about himself he will be sure to come, then we can ask him how he makes himself so happy all day long."

They all did as Elephant suggested. Sitting side by side on the twinkling sand, they opened their mouths wide and sang:

Whad-Da-Ya-Think is in the sea,
In the sea, in the sea,
Happy as happy as happy can be,
My little dearie dumplings?

Then they cocked their ears and listened, hoping Whad-Da-Ya-Think would hear the song and join their circle. They heard the big waves booming on the rocks and the shrill music of the singing toads. They heard the water laughing among the reeds. But they did not hear one sound that might be the footsteps of Whad-Da-Ya-Think.

Klop! Klop! Klop! A big turtle walked slowly along, leaving the prints of his fat hands in the sands of the sea. When he came upon Elephant, Giraffe, Parrot, Diana Monk and Hippo, he stretched his neck far out of his big hard shell and said:

"What a silly song you are singing—What do you think is in the sea? Any one knows what is in the sea, 'happy as happy as happy can be!'"

You should have seen those jungle folk stare at Turtle when Turtle said Ostrich's song without mispronouncing a single word.

Elephant bellowed: "Well, the next time Ostrich sings her babies to sleep I wish she

would sit up straight and speak distinctly. Here we came down to the wide blue sea to find a person called Whad-Da-Ya-Think, so we might find out how to be more cheerful, and there isn't any Whad-Da-Ya-Think. We shall never find out what is in the sea, 'happy as happy as happy can be.' If we knew, we might be happy too."

Turtle stretched his neck high, just as if he were about to gobble a star, and scratching his side with his right hind leg, said:

"Why, I can tell you what is in the sea, 'happy as happy as happy can be,' and I can tell you the why and the how of it. Fish are in the sea,—pink fish, blue fish, green fish, fish of all colors, gold fish, silver fish, long fish, short fish, fat fish, thin fish, striped fish, speckled fish—." Turtle went on and on, naming every kind of fish in the deep blue sea.

The jungle folk put their claws and their hands and their hoofs in their ears, because they did not like to hear about so many fish.

Elephant trumpeted: "That is enough fish for any sea. What we want to know is how they make themselves so happy."

Turtle thought a long time, then he said: "I know quite well how to be happy all day long. I eat my food cheerfully, and I am always contented with the big wide world, so I am happy all day long. When one is discontented and tries to find something to be cross about, his dinners are not happy and he is as cross as two sticks on the Jing-Jang-Jing."

The jungle folk listened to every word Turtle said. They repeated it until they understood just how to be happy.

"Turtle is right," Elephant said. "Hippo snorted at his nice root dinner, Parrot squawked at Hippo, Giraffe snorted at Parrot, Diana Monk squealed at Giraffe and Parrot, and I wanted to squirt Jing water on every creature in the jungle, just because my nap was disturbed. Let's go back home and try to be cheerful; then we shall be happy all day long."

So one by one the Jing folk turned their backs to the sea and trotted, galloped and swam back to the place from which they had come. Before long they sat down under the rubber tree and cheerfully ate their evening meal.

The next day when the hot jungle sun peeped through the clump of tall bamboo, Mother Ostrich sat down again in the hot sand and began to sing to her babies. This time she sang the second verse, and what do you think she sang?

Whad-Da-Ya-Think is in the sea,
In the sea, in the sea,
Happy as happy as happy can be,
My little dearie dumplings?

Lots of fish are in the sea,
In the sea, in the sea
Happy as happy as happy can be
My little dearie dumplings!
Pink fish, blue fish, green fish,
Fish of all colors, gold fish, silver fish
Long fish, short fish,—

and Ostrich went on and on, naming every fish in the deep blue sea, just the way Turtle had named them to the jungle folk when they sat in the sands.

The jungle folk had to laugh when they heard that second verse. That put them in a good humor, and they were happy all that day. They liked being happy so well that they never forgot what Turtle said, except once in a month of jungle moons. When they did forget, Elephant reminded them of the lesson they had learned down by the deep blue sea.

*Ostrich was singing her twenty babies to sleep.*

# New Books *on* Health

*Reviews of Interest to General Reader, Parent and Teacher*

### THE HUMAN BODY

By Trevor Heaton, M.D. Cloth. Pp. 250. Price, 83. Printed in Great Britain. E. P. Dutton and Company, New York, 1927.

THIS book is one of the Simple Guide Series, which has for its object the providing of reliable information in a form not too technical. It is presented by an author who not only knows his subject but has literary ability. As Dr. Heaton says in his preface, the book is intended to be neither exhaustive nor profound, but it is intended to be readable.

The introductory chapter makes it plain that this book will not find favor in those benighted localities that subscribe to the theory that the human animal has undergone no evolutionary changes, for the author, in some interesting detail, shows that the present condition of the race is only the outcome of the long process of development from a simpler form. Very much to the point is his statement:

"There was a time, and not so long ago, when the antecedents of the human race were viewed differently. By a mistaken use of the Bible, which is the most wonderful book in the world, a vivid but pictorial drama of Creation was interpreted as a scientific statement of facts. This prosaic rendering of certain passages in the Old Testament robbed them of half their unique poetic beauty, and added nothing to their moral value; for the treatment of historical detail in these passages is merely conventional, and quite irrelevant to the moral issue."

Then follow chapters on "Food and Indigestion," "Circulation of the Blood," "Temperature Regulation and the Skin," "The Nerves and the Brain," and various other subjects dealing with the human body. The chapter on "Reproduction and Development" is especially good. The nontechnical reader has been prepared for it by the previous chapters, especially the one dealing with internal secretion. The descriptions of the sex function, of fertilization, of the development of the embryo and of the growth of the child, are done with a simplicity and clearness that is as wholesome as it is informative. In all, the book is one that can be unreservedly recommended to the intelligent layman. It combines those necessary but unusual factors, readability and sound scientific information. ARTHUR J. CRAMP, M.D.

### CERTAIN SAMARITANS

By Esther Pohl Lovejoy, M.D. Pp. 302. Price, $3.50. The Macmillan Company, New York, 1927.

THE work of the American women's hospitals during the World War, and particularly in the Near East, has been commended by every nation as a unique humanitarian achievement. The story of the work is beautifully told in this book by Dr. Lovejoy. She writes humanely and with a sense of humor. Again and again her accounts are reminiscent of the writings of Lawrence, whose "Revolt in the Desert" has been a feature volume of the current book season. The illustrations add interest to the excellent text.

Again and again the philosophical comments of Dr. Lovejoy sparkle through this text. "Cold, hunger and disease," she says, "are dreadful levelers. They level down to the depths of the soul. It may take three generations to make a gentleman but the vicissitudes of war and revolution have demonstrated that either a lady or a gentleman can be unmade in far less time." Here is an account of one phase of the World War that will set an example for other histories of the great conflict.

MORRIS FISHBEIN, M.D.

*Charter granted to the American Women's Hospitals by the Greek people of Constantinople.*

### APPROACHING MOTHERHOOD

By George L. Brodhead, M.D. Third edition. Cloth. Price, $1.50. Pp. 193. Paul B. Hoeber, Inc., New York, 1927.

SINCE the review of a previous edition of this book in HYGEIA for May, 1926, a third edition has been called for. This book is one of the best of the guides for the expectant mother. The question and answer style in which it is written is interesting and effective because the questions are taken from those submitted to the author by his patients in his long experience as an obstetrician. They are arranged in logical order as they arise during the time of pregnancy, confinement and the puerperal state and a comprehensive index facilitates ready reference.

There is room for question as to a few items. We doubt the wisdom of advising, as does the author on page 49, that after the child is delivered "one teaspoonful of the fluid extract of ergot with 2 tablespoonfuls of water should then be administered to the mother by mouth." On page 57, in discussing sciatica, it is stated that "occasionally the administration of 5 grains of aspirin alone or in combination with one or more analgesics may be necessary, while in more severe cases an opiate may be required."

The administration of such drugs belongs exclusively to the physician; ergot and opiates can be obtained only on his prescription. He may deem it wise in certain cases to instruct the nurse to give such anodynes, but that is his affair. It is much wiser not to mention them in a text written for the patient. Even the giving of laxative medicines should be under the doctor's control. "Auto-intoxica-

tion" is discussed in the chapter on the complications of pregnancy and "thorough evacuation of the waste products by means of gentle laxatives and enemas" is advised. "Auto-intoxication" has been much overemphasized. The trend of professional opinion is distinctly away from the notion that it is a frequent or important cause of illness.

These are minor faults, however, and detract but little from this admirable book of instructions for the woman in childbearing.

JOHN M. DODSON, M.D.

### PRACTICAL DIETETICS IN HEALTH AND DISEASE

By Sanford Blum, M.D. Second edition. Cloth. Price, $4. Pp. 362. F. A. Davis Company, Philadelphia, 1926.

THIS book suggests dietaries for patients suffering from various diseases. In a number of instances, though not as often as may be desired, general principles are laid down. This is followed by a classification of foods under two headings: one of permitted, the other of forbidden viands. Under the latter heading, unfortunately, foods are at times included that suggest the author's personal prejudice rather than scientific deliberation. Then type meals are given, followed by general hygienic directions.

While there is much good in this book, there is also room for argument, not to say criticism. Why, for instance, were eggs not included in the dietary for secondary anemia, eggs being one of the most important foods in anemia? Why did the author emphasize the starvation treatment of diabetes, which is now generally abandoned —though, of course, the undernutrition principle is still recognized? Although the discovery of insulin is given as one of the reasons for a new edition of the book, one looks in vain for its mention elsewhere.

There are nevertheless a sufficient number of good things in the book to make its study worth while at this time, when satisfactory publications on practical dietetics are so conspicuous by their absence.

BERNARD FANTUS, M.D.

### HEALTHY BUNNY

By L. R. Smith. Cloth. Pp. 110. Illustrated. Price, $1. C. H. VanVliet Company, Chicago, 1926.

THE rabbit, always popular with children, appears in this little volume of stories and rhymes as the champion of healthful living. Cleanliness, long hours of sleep, fresh air and exercise, and safety are some of the lessons he teaches his furry friends. The book has been amusingly illustrated by Penny Ross and will find favor with small children.

JANE STAFFORD.

### INFANT MORTALITY AND ITS CAUSES

By Robert Morse Woodbury, Ph.D. Cloth. Price, $3.50. Pp. 192. Williams & Wilkins Company, Baltimore, 1926.

THIS little book is written by one who not only is an expert in the study of statistics but also understands some of the problems of children's diseases. It contains many interesting tables and studies of infant mortality from 1915 to 1921. It attempts to show the various factors that are concerned in infant mortality, such as the nature of the infant's feeding, race, nationality and economic conditions. An interesting side issue is the description of how the tables themselves are made and the difficulties of obtaining really accurate statistics. There is also an instructive chapter on the infant welfare work being done in New Zealand, famous for its low infant mortality rate.

The book does not attempt anything but statistics, but in doing so it answers a striking want in the literature of infant welfare. All workers in this field have long felt the need of such a book, and this one is extremely competent.

JESSE R. GERSTLEY, M.D.

### HEALTH PROBLEM SOURCES

By Marion Olive Lerrigo. Pp. 151. Teachers College, Columbia University, New York, 1926.

IN THE effort to reconstruct the school curriculum educators have adopted the practice of collecting all of the available topics in each of the fields of instruction with which pupils should be made acquainted. From comprehensive lists of this kind, textbook makers and others who are responsible for teaching select those topics that are most appropriate because of their interest to pupils or because of their urgency.

Miss Lerrigo has canvassed the mortality statistics of the bureau of the census, the publications of the U. S. Public Health Service, books on personal hygiene and other similar sources and has tabulated and classified all the health problems mentioned. She has not attempted to organize these into a school course on health but presents her findings as raw material to be used after suitable experimentation by teachers and school supervisors. She avoids the mistake sometimes made by less cautious investigators of curriculum materials of advocating a school program based directly on frequency of mention of topics. There is in a rough general way a correspondence between the frequency of mention of topics and their importance, but there are many other considerations such as availability for pupil comprehension and urgency from the point of view of pupil needs that must be considered in making a school program.

The book will be of interest to those who are engaged in scientific studies in education, to textbook makers and to school officers who are responsible for programs of instruction.

CHARLES H. JUDD.

### OVERCOMING TUBERCULOSIS

AN ALMANAC OF RECOVERY. By Gerald B. Webb, M.D., and Charles T. Ryder, M.D. Cloth. Third edition, revised. Price, $2. Pp. 188, with 106 chart sheets. Paul B. Hoeber, Inc., New York, 1927.

TO ALL who are intimately concerned with tuberculosis, both the individual recovery as well as the general conquest of the disease, the new edition of "Recovery Record," which now appears under the much more inciting and comprehensive title "Overcoming Tuberculosis," will prove helpful.

In chapter I the rationale of record keeping is set forth in a manner that makes this otherwise perfunctory task a pleasure to the patient.

There is scarcely a page dealing with the technic and hygiene of recovery that is not filled with sane and serviceable suggestions to arouse the best efforts of the patient to help himself to health. All this is presented in simple terms.

The quotations that accompany the chart sheets are drawn from a wide range of eminent authors and are cleverly arranged in a manner appropriate to serve as a wholesome mental stimulus at each stage of physical improvement.

The style of writing is clear and free from unnecessary verbiage; the tone is comforting and encouraging. Books such as this do much to rob this age old malady of the grim horrors of inevitable fatality.

R. G. LELAND, M.D.

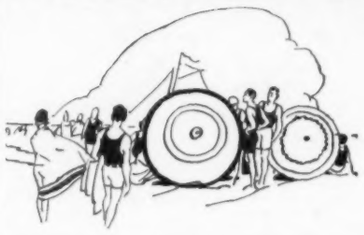
### STAMMERING AND ITS TREATMENT

By Samuel D. Robbins. Cloth. Price, $2. Pp. 121. Boston Stammerer's Institute, Boston, 1926.

THIS is a compact, practical discussion of stammering addressed chiefly to stammerers themselves who are seeking relief. It discloses intimate knowledge and treats the problem with a detail and frankness and intelligence that are both refreshing and rare. Only mature and well educated stammerers could hope to apply successfully the knowledge presented for the solution of their own problems. But the greatest usefulness of the book will be found in its perusal by other students of stammering.

Taken for what it purports to be, a concise statement of the practical aspects of the problem, as understood by the author, the book is well worth while.

ELMER L. KENYON, M.D.



# News *and* Views

*From the*

## FIELD OF HEALTH

### SMALL BABIES CAN'T ADJUST TO HEAT

Small babies have a hard time in hot weather. Their delicate systems are unable to cope with extremes of temperature, for they are not adjusted to the rigors of life, explains Dr. J. L. Blumenthal, director of the bureau of child hygiene of the New York City health department.

Part of the process of growing up is this adjustment to life which concerns, to some extent, the sympathetic nervous system. This nervous system controls such involuntary processes as digestion and, being extremely delicate, is easily upset by changing external conditions. That is why so many babies have digestive difficulties during the hot weather and why their food supply must be especially safeguarded from spoilage or infection.

### HAY-FEVER SEASON AT ITS HEIGHT

Midsummer finds over a million persons in the United States suffering from hay-fever. While some victims suffer from this disease at other seasons or only in certain localities, the disease is always caused by the protein of the pollen from trees, shrubs or plants. Some are susceptible to the pollen of one plant only and when away from that plant they are free from the disease and its attendant discomfort.

Usually the plants are not the showy ones with brightly colored flowers and strong scents. Common grasses and weeds are most frequently the offenders. Pollens are rather buoyant and may be carried great distances by the wind. That of ragweed has been carried as far as five miles.

The relief of hay-fever is a problem on which scientists have worked for many years. At present it is possible by a simple test to determine which pollen is causing the hay-fever in an individual patient. Preventive treatment before the onset of the disease or intensive treatment during the hay-fever season may be undertaken.

The preventive treatment is preferable and should start at least four months before the disease is known to start, advises the Connecticut state department of health.

### HYDROPHOBIA MAY SPREAD RAPIDLY

Hydrophobia is a disease that travels fast; one rabid dog can do a tremendous lot of mischief, and infected dogs carried by tourists are a big factor in the spread of the disease, according to the Illinois state health director.

The reason hydrophobia is worse during the dog days is because people in general and children especially stay outdoors more in summer and are therefore more exposed to rabid dogs. Muzzling or leashing of all valuable dogs and the destruction of ownerless or stray ones is the only reliable means of checking the spread of rabies.

Dogs that bite people should be captured alive, securely leashed, and kept under observation for at least ten days. A veterinarian can tell by observation whether or not a dog is rabid. Persons who have been bitten should have immediate medical attention regardless of the condition of the dog. A physician will know what measures to take and whether or not the Pasteur treatment should be given.

### CRYSTALLIZER OF INSULIN HONORED

The man who crystallized insulin, Prof. J. J. Abel of Johns Hopkins University, has been awarded the highest honor the American Chemical Society bestows, the Willard Gibbs Medal. The award was made at the second annual meeting of the midwest regional division of the society at Chicago, May 27 and 28. Crystallization of insulin involved the production of insulin of the highest degree of purity and makes the control of the administration of the drug much more accurate.

### BE SURE YOUR HOT DOG IS HOT

The hot dog is a favorite after swimming refreshment at most pools and beaches, but unless the hot dog is surely hot, it should not be eaten, advises the New Haven health department.

The hot dog is composed mostly of pieces of pork. Raw pork may contain the cysts of worms known as tapeworms and trichinae. If these cysts are taken into the stomach of man they will breed in the intestines and cause trouble. That is the reason for eating only pork that has been well cooked, as the cooking kills the embryos of the worms.

To be sure that a hot dog is safe it should be sliced through the middle and cooked on both sides, so that the inside will be thoroughly cooked also.

### BENZOL DECLARED TO BE INDUSTRIAL HAZARD

One out of every three women who are exposed in factory work to the fumes of benzol suffers chronic benzol poisoning, concludes a report on the study of the situation made by the bureau of women in industry of the New York labor department.

Six typical factories using benzol compounds were investigated. The seventy-nine women workers employed were exposed to the fumes either by using the benzol compounds themselves or by working in the room where such compounds were used.

Benzol, being one of the best known solvents for gums, resin and fats, is used in making hats, shoes, rubber articles, artificial leather, many shellacs, lacquers and quick-drying paints. The factories studied were engaged in the manufacture of tires and rubber goods, cameras, shoes and sanitary tin cans.

Among the results from this poisoning the report mentions anemia and lowered resistance to infection. Two safeguards are advised in every plant where benzol is used: efficient systems of local exhaust ventilation and thorough and persistent medical supervision of exposed workers. Satisfactory

substitutes should be searched for and used, the report also recommends.

## PROPER CARE IMPORTANT IN EPILEPSY

Next to finding a cure for the disease, the most important problem of epilepsy is securing proper care and treatment for the victims of the disease, declares Dr. Alan McDougall in *The Child*. Many such patients suffer more from treatment than from the disease. The fit is so striking that the patient is apt to be lost sight of, and as a result of ill treatment he may develop other unpleasant characteristics that are quite commonly but wrongly attributed to the disease.

Parents are the best custodians of their children in health but they are not naturally the best persons to have charge of sick children, though by special training they may become so. The problem of selecting the best person to have charge of epileptic patients is extremely difficult, much more so than the raising of money to found an epileptic colony, for instance.

The moral deterioration common to epilepsy is more a result of mishandling of the patient and uncongenial surroundings than of the disease itself, in the opinion of the British physician.

## FORCE ANTITYPHOID VACCINATION IN ITALY

Compulsory antityphoid vaccination for certain classes of citizens has been decreed by the Italian prime minister, states a report in *The Journal* of the American Medical Association. The physician who performs the vaccination must report to the health officer of the commune the condition of the person vaccinated, the source of the vaccine used and the mode of its administration.

The classes for whom vaccination is now compulsory include: persons employed in the care of patients or in the cooking departments, disinfection services, laundries or other cleaning services of hospitals or sanatoriums, public and private; persons employed in public laundries, transportation of the sick or in disinfection services; and persons employed in the water department or in the collection and sale of water.

In addition, the prefect of a province may, at the request of the provincial physician, require antityphoid vaccination of the entire population under his jurisdiction in case of a threatened epidemic or in other cases in which it is deemed necessary.

## HEART NEEDS MORE ATTENTION

"For all living things that possess a heart, it is a most important organ," declares Dr. Oscar Dowling, president of the Louisiana state board of health. The condition of the heart, important as it is, is usually a matter of attention only when it makes itself known by the presence of trouble.

The acute infectious diseases of children—scarlet fever, measles, diphtheria, tonsillitis and above all rheumatism—are known to be responsible, to a large extent, for cardiac breakdowns later in life. Chronic infections of teeth, sinuses and ears are other causes of heart disease.

The heart has great powers of recuperation, but it must be given a fair chance. Too often the necessity for rest is not recognized until the damage is beyond repair.

## CITY STANDS FIRST IN DENTAL CORRECTION

The completion this spring of a 100 per cent dental correction program entitles Athens, Ga., to the position of first city in the world in the field of dental correction. In any place in which the dentists and departments of education and health unite, as they did in this southern city, the same campaign can easily be put across, declares the city health commissioner.

Health workers in schools, churches and clubs made speeches and distributed literature. Schools were given holidays on the completion of 100 per cent correction. Each child was given by his teacher a card stating that he needed no dental work or that all necessary work had been done. This card was returned with the signature of his dentist when correction was complete.

## *Come On In, the Water's Fine!*

Lindy Galloway

*No better way can be found to pass the hot summer days than in the water and on the sunny beach. However, one must guard against sunburn, which may be very serious. The skin should be allowed to tan gradually.*

*Ewing Galloway*

## *OLD SWIMMING HOLE GLORIFIED*

**Modern outdoor pools, such as this one in Cleveland, have been built in parks all over the country to take the place of the old swimming hole.**

## *HOW DOCTORS SPEND LEISURE TIME*

**This fine polo group is part of an exhibit recently held of art work—paintings, sculpture, wood carvings and etchings—done by busy physicians and surgeons. This display at the Academy of Medicine was the first of its kind ever held in America.**

## *LINED UP FOR DAILY BATH*

**Boys and girls of New York's tenement district use the public bathhouse so they need not miss their daily bath learned about in hygiene class.**

*Keystone View Co.*

*Ewing Galloway*

*Edith S. Watson*

### *SONS LEARN FATHERS' TRADE*

**These sturdy sons of Newfoundland fishermen are learning all about the management of small boats so they may ply their fathers' trade when they grow up.**

### *KEEPING COOL IS GREAT JOB*

**Tommy decided he could keep cool by means of soda pop and ice cream cones, so he laid in a large supply. Plain water or fruit juice would have been better than the carbonated beverage.**

*Pacific and Atlantic*

### *BUILDING HEALTH OF FUTURE CITIZENS*

**In Oregon the state baby examiners tour the state, stopping at every town and hamlet to hold sessions at which the babies are thoroughly examined and their mothers instructed in proper methods of child care.**

*Underwood and Underwood*

## *SHOPPERS' CHILDREN PLAY ON ROOF*

**While mothers and nurse maids shop, the children may be left in this pleasant outdoor playground, away from the crowds and possible germs of the shops. This playground is atop a large London department store.**

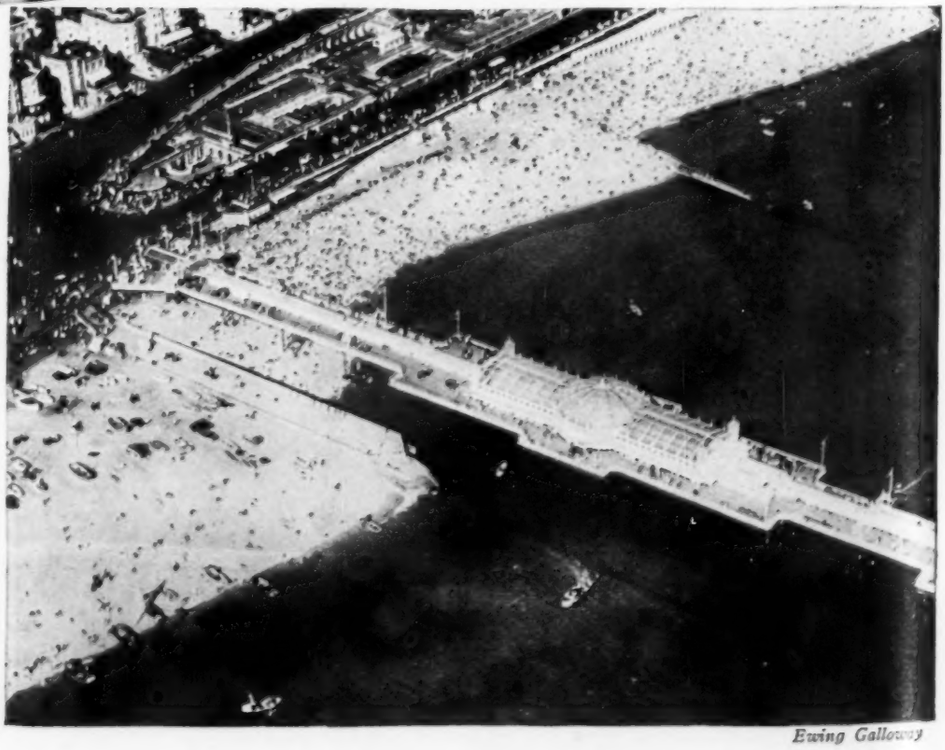
*International Newsreel*

*Herbert Photos, Inc.*

## *DIRECTS WELSH PUBLIC HEALTH*

**In Great Britain public health receives the attention of many prominent and titled persons. The new national health commissioner of Wales is Lady Violet Douglas Pennant, who has long been active in civic and philanthropic work.**

THOUSANDS OF ENGLISH CROWD THIS HUGE PIER and beach at Brighton on summer holidays.



*Ewing Galloway*

# Questions *and* Answers

*If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a two-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed.*

### Excess Fat; Height and Weight Tables

*To the Editor:*—Does excess fat tend to make a person less efficient? What is your opinion of weight tables? E. D., Ohio.

*Answer.*—Excessive fat does tend to make a person less efficient as to physical work. Height and weight tables are helpful if properly used. They can easily be a nuisance and detriment, however, if they induce people to worry unnecessarily.

### Albumin in the Urine

*To the Editor:*—What is the cause of albumin in the urine? Will diet correct it? Please name articles of food that can safely be eaten, also those that would be harmful or would aggravate the trouble. Is the habit of drinking water before breakfast beneficial?

E. D., Indiana.

*Answer.*—Albumin in the urine is most commonly a result of an inflammation of the kidneys. A few persons show albumin in the urine at times throughout a long life. This is sometimes spoken of as physiologic albuminuria. As a matter of fact, the appearance of albumin in the urine can never be regarded as strictly physiologic.

The mere fact that one has albumin does not afford an adequate basis for advice as to diet. Only the physician who has examined the patient can advise wisely as to diet or treatment.

Drinking a glass of water before breakfast is usually of advantage.

### Vaccination

*To the Editor:*—Will you tell me the possible length of immunity after vaccination for smallpox; also your idea of vaccination for young children.

J. C. W., Missouri.

*Answer.*—Immunity afforded by vaccination is lost by different persons at different rates. Some persons need to be vaccinated more often than once in five years to maintain full protection. Others may be vaccinated less frequently than once in twenty years. Ordinarily vaccination once in every five or ten years is desirable, so that a maximum protection is maintained but without the inconvenience any time of a reaction more severe than the so-called immunity reaction except for the original first vaccination.

Whenever there is an epidemic in the vicinity or if there is any reason to suppose that one has come in contact with a person having smallpox, it is well to be revaccinated, even though one has been vaccinated within two or three years. The kind of reaction that follows demonstrates whether or not one is still immune.

Vaccination of infants is attended with less general reaction and fewer complications than vaccination of older children. So vaccination is advisable as soon after birth as practicable, preferably between 4 and 6 months. The cooler seasons are perhaps more favorable.

### Castor Oil

*To the Editor:*—Is castor oil a digestive oil? If used, will it become a habit?

W. F. McK., Maryland.

*Answer.*—Castor oil is not digested to any considerable extent because, acting as a laxative, it is probably carried along through the intestine too rapidly to be acted on by the pancreatic juices. In persons who are not sensitive to the laxative effect, however, it might be digested as it is a vegetable oil and subject to saponification by the fat splitting ferments, as are other oils of vegetable or animal origin.

The taking of castor oil does not become a habit in the sense that it produces a craving as do narcotics, for example, but it loses its effect so that the dose has to be steadily increased in order to produce bowel movement. It is not good to use it repeatedly.

### Lump Under the Arm

*To the Editor:*—What are some of the possible causes of a lump under the arm? It is not painful and is larger some times than others. R. M. S., New York.

*Answer.*—A lump under the arm that is not painful is probably an enlarged gland. However, it is impossible to determine this without knowing the cause and without a personal examination. If the lump continues to increase in size, it would be wise to see a physician.

### Sacro-Iliac Joint

*To the Editor:*—I have had trouble with pains in my back ever since I first played golf; it sometimes comes on after I play handball excessively. One physician says the trouble is with my sacro-iliac joint and that I can never take any twisting exercises with comfort again. I don't mind the long word, but dislike the verdict about the exercise. Could you give me some general information about the usual fate of sacro-iliac patients. Should I have an x-ray photograph taken and should I get a brace that can be worn during exercise?

E. J. C., Pennsylvania.

*Answer.*—Absent diagnosis is usually quite as unsatisfactory as absent treatment.

A game of golf should be accomplished without pain when indulged in wisely. Excessive use of a group of formerly unemployed muscles is likely to lead to muscle strain with pain in the affected muscles. Perhaps in as complex a combination of muscles, ligaments, bones and nerves as make up the human spine things other than muscles are affected and add to the local distress. In this complex the sacro-iliac joints doubtless may at times have a share, but to blame them for the whole offense gives them a sinister reputation that is quite undeserved. Their participation in the process can only be determined by a proper medical examination in which an x-ray may assist.

As to the usual fate of so-called sacro-iliac patients, it is theirs to pass through several stages of men-

tal depression and physical disability more on account of the "long word" and dark prognosis than on account of the usual symptoms that, if felt elsewhere than in the back, would be given little attention. Refraining from motion or exercises that excite pain is the logical thing to do. Graded exercises that do not reach the painful stage may be practiced until soreness no longer develops after good stiff work. The pain may not subside so easily. Again proper medical assistance must be called. The treatment may consist of braces, belts or other apparatus or even surgery, the intention being to limit the movement of the afflicted joint.

The condition may be the reflection of a systemic disturbance responding in various regions of lessened resistance to stimuli that ordinarily would cause no abnormal reaction.

There may be active disease, as tuberculosis, in this location. So it is evident that the best way to approach relief is to have a competent physician first study out as near as possible the location and cause of the disorder and then institute the treatment indicated.

It is better to be an optimist, however, regarding the "long name" and to refuse to be an invalid without first class authority.

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### Skin Peeling for Scars

*To the Editor:*—I have read with great interest the article in the March issue on the subject of poisonous cosmetics. There is mention in it of disastrous effects of skin peeling. Would you kindly inform me what they are? I had chronic acne, which scarred my face, and I am having skin peeling done to remove the scars. There is a decided improvement as the scars appear flatter, but I am anxious to know if there is any danger connected with this.

E. C., New Jersey.

*Answer.*—Most persons fail to distinguish between true scars and the pigmented relics of acne or other inflammations of the face. In a scar there is a destruction of the elastic fibrils that support the deeper layer of the skin, as well as a destruction of the glands and hairs in this area. This destruction is permanent. These structures can never be regenerated. The pigmented spots and bluish discolorations are different and are slowly absorbed spontaneously.

"Peeling" the skin, no matter how drastic, can affect only the outer layer, or epidermis. The outer cells become loosened and are shed. This process is always going on. Peeling merely hastens it. The deeper layer is neither shed nor regenerated, hence a scar cannot be made to flatten out or disappear. However, the inflammatory process always carries the risk of secondary infection, which may cause more marked scarring or have even more disastrous results.

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### Eyestrain

*To the Editor:*—I have never worn glasses. I was a bookkeeper and stenographer ten years previous to marriage. The upper back part of my head aches all the time. Do you suppose this comes from my eyes and I should buy glasses, or do I need something for my kidneys to cure my headaches?

A. H., California.

*Answer.*—Eyestrain is a frequent cause of headache and it would be advisable to have the eyes tested.

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### Mirror Writing

*To the Editor:*—My 10 year old girl is in the sixth grade, has an I. Q. of 145 by the Binet-Simon tests, seems normal in every way, except that she is near-sighted and left-handed. She writes with either left or right hand but with the left hand writes only "mirror writing." When she first learned to write she seemed not to know that her left-handed writing was different from her right.

F. A., North Carolina.

*Answer.*—Mirror writing is not a rare condition in cases of left-handedness, especially when the person writes with the right hand. Some interesting studies are being made of these conditions at the University of Iowa by Dr. Samuel T. Orton and his assistants and will be described in HYGEIA for September. The mirror effect is, of course, only the exact reverse of ordinary right-hand writing. It has no bearing on intelligence.

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### Dry Skin

*To the Editor:*—How should one care for dry skin, which is becoming "crêpey" in appearance. I use a cold cream for cleansing. Is there a safe treatment of any kind whereby dry skin can be helped and wrinkles eradicated?

R. K. M., California.

*Answer.*—The skin may appear dry when there is a low grade inflammation present. This results in the imperfect formation of the outer, horny layer. The skin surface then looks dry and scaly.

Occasionally some disturbance of nutrition or of the general health causes the absorption of the fatty layer just below the skin. This results in an exaggeration of the natural lines and may be associated with dryness. In the majority of cases, however, with advancing years the network of elastic fibrils that form a sort of skeleton in the skin and help to give it form become changed chemically or are totally absorbed. The wrinkles and lines that result are ineradicable.

The remedy depends on the source. Any source of chronic irritation, as too much or too strong soap, overexposure to sun and wind and irritating chemicals in cosmetics or creams, should be avoided. The general health should be maintained at the highest possible level. A moderate amount of massage with cold cream may aid in maintaining the tone of the skin.

For the inevitable changes in the texture of the skin that come with the passing years one must develop a proper philosophy of life.

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### Miscarriage

*To the Editor:*—Is it true that if a woman has had one miscarriage she is liable to have another? If so, are there any precautions that will prevent it?

G. A. W., Colorado.

*Answer.*—Miscarriage is due to a variety of causes, such as fibroid tumors of the uterus, displacements of the organs and inflammations, or general systemic disturbances, such as heart or kidney disease, acute illness and syphilis. If any condition exists that has been the cause of miscarriage once, it may cause it again. Sometimes the cause is not plain, and there is such a thing as habitual abortion.

A woman who has once miscarried should have a thorough examination by a competent physician, and any probable condition found should be treated appropriately and cured if possible. On the inception of the next pregnancy she should consult the physician and remain under his observation. It does not follow that once a miscarriage always a miscarriage.

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### Sippy Diet and Diathermy Treatments

*To the Editor:*—Where can I obtain information as to the Sippy diet for stomach ulcer? Mail me the addresses of physicians who give diathermy treatments at their offices. I have been told that such treatments will dissolve lime deposits in the spine and other joints of the body and that they will kill the germ of rheumatism in the system.

M. L. R., Illinois.

*Answer.*—The Sippy treatment is described in several of the textbooks on medicine but it is not a treatment that can be self-admin-

istered. In the first place, the presence of gastric ulcer has to be determined by a careful, thorough examination and study of the patient. Then, the diet and the rest of the Sippy plan need to be outlined carefully for the individual patient. In general, it consists of a short period of fasting in bed and then the administration of small quantities of milk at frequent intervals and also the giving of alkalis to neutralize the acid of the stomach. This diet is gradually increased and other foods are added.

HYGEIA is unable to give the names of physicians who are prepared to give diathermy treatments. There is considerable difference of opinion as to the power of this treatment to produce the results mentioned. The family physician should be able to obtain information as to where these treatments can be obtained.

### Diabetes

*To the Editor:*—Has any treatment other than insulin been discovered for diabetes? I wish they would find something in tablet form. C. M. T., Canada.

*Answer.*—There is at present no satisfactory substitute for insulin, although it is of course possible that such may be found.

Two remedies to be taken internally have recently been announced and they offer promise. Neither has been tried out sufficiently to determine whether or not it is suitable to use and neither is yet available to the public.

### Mucous Colitis

*To the Editor:*—I have been afflicted with mucous colitis for several years and have about given up hope of cure. One specialist advised mineral oil; another advised drinking buttermilk; and still a third prescribed pancro-bilin tablets. I should like to know if there is anything that can be done for this condition. Does it ever develop into an abscess of the intestinal tract? I have a great deal of soreness on the right side, which is not in the appendix. Could this be due to the colitis? Would the continual taking of pancro-bilin tablets be harmful? Of what importance is diet in this condition? S. S. V., Illinois.

*Answer.*—Mucous colitis is a chronic disorder of the large intestine in which the bowel function is greatly disturbed, resulting commonly in alternating constipation and diarrhea with a marked tendency to the discharge, at recurrent periods, of masses of mucus. Obstinate spastic constipation usually dominates the situation. During the attacks, in which quantities of mucus are passed, there is apt to be an increase in the abdominal distress, general malaise and irritability of the nervous system. The colicky pain due to the bowel spasm may be intense. Nausea may be troublesome. Insomnia is a contributing factor.

Patients suffering from this trouble are sometimes greatly alarmed by passing sections of what appear to be the lining of the bowel but in reality are sheets or tubes of mucus that have dried out in contact with the bowel wall.

Mucous colitis in the strict use of the word is a relatively rare disease. What is commonly diagnosed as mucous colitis is a catarrhal colitis resulting from the action of some irritant on the mucous membranes of the colon. The prototypes of this common disorder are the forms of catarrh of the bowel caused by the long continued use of cathartics or enemas and that important group in which the irritant results from an abnormal fermentative condition in the colon, due to a failure of proper digestion and absorption of starches and sugars in the small intestine.

Correct diagnosis or determination of the probable cause in a given case of colitis requires an accurate and careful examination of the bowel movements. A more thorough knowledge of the nature of this trouble and of its rational treatment would greatly lessen the number of unnecessary operations for so-called chronic appendicitis. The pain and tenderness in the region of the appendix are often due to an irritated spastic bowel.

The essential elements in treatment consist in removing the irritation of the bowel, which causes the catarrhal condition, soothing the hyperirritable nerve plexuses in the bowel wall and, by means of rest, heat to the abdomen, appropriate diet and certain soothing medications, restoring normal peristaltic action. These measures are usually effective. A basic requirement, however, is the avoidance of all cathartics and irritating enemas. The authority who answered this question does not believe that acidophilus milk or pancro-bilin has value in treatment.

### Purifying the Blood

*To the Editor:*—Will you please give me any data available concerning the best processes of purifying the blood of all toxins; also what are the most serious causes for poison in the blood. F. J. R., New York.

*Answer.*—The most effectual method by which the blood purifies itself of toxins is through the generation by the cells of the body of antitoxins that neutralize the toxins.

For example, when a minute quantity of the toxins of diphtheria obtained from a filtered culture of the diphtheria bacillus is injected into the body (safeguarded in actual practice by the addition of a small amount of antitoxin), the cells of the body are stimulated to the generation of a substance that neutralizes the toxins and is called antitoxin.

The term "blood purifier" ought never to be used. The fact is that the blood is constantly undergoing change, giving off certain materials to the tissues and taking on waste matter from the tissues, which it carries to the kidneys, the lungs and bowels for elimination.

Fresh air, exercise, good food and plenty of water are the agents that keep the blood in condition.

### Parentage of a Child by Blood Tests

*To the Editor:*—Is there a definite method such as a blood test by which the parentage of a child can be determined? If so, is there any one on the west coast who can make such a test? R. C., California.

*Answer.*—It is possible by means of blood tests to determine that a given man cannot be the father of a given child or that a given man belongs to the same blood group as that to which the father of the child belongs. This, in brief, is all that can be determined in regard to the paternity of a child. In other words, it is not possible by blood tests to determine the father directly.

The tests can be made in the laboratories of either the University of California or Stanford University.

### Harelip

*To the Editor:*—Why is a child born with harelip and cleft palate. So far as we can learn there are no deformities in either of our families. I have been accused by many neighbors of "marking my baby." E. C. K., Montana.

*Answer.*—Harelip and cleft palate are among the most frequent of the congenital deformities and have been known from earliest times. They are apt to occur in several members of the same family and direct heredity has also been noted. They are due to faults in the folding together of the plates and layers that grow out sideways from the spinal cord axis and round up in front to form the body cavity. These plates and layers develop out of the cells of the embryo and if the

rounding up process advances normally they meet in the midline of the body and grow together so that the body cavity is entirely enclosed.

Sometimes it happens that the developing walls do not meet exactly or do not close perfectly and a fissure, cleft or opening is left. Such fissures may occur in the back and leave the spinal canal exposed, as in the cases known as spina bifida. Others occur anywhere along the midline where the layers should grow together in front.

None of the deformities that have been mentioned are the result of maternal impressions and no woman under any circumstances could thus mark her baby.

### Drinking Fountains; Washing of Hands

*To the Editor:*—I am making a study of plumbing fixtures for public schools. I find the following recommendations in the literature on the subject: Drinking fountains should be so constructed that a child in using the fountain does not touch his lips to the bubbler. Toilet rooms should be lighted by direct sunlight, whenever possible, because direct sunlight is a destroyer of pathogenic germs. Children should be taught to wash their hands before eating and after using a toilet fixture, to prevent the spread of disease. It is more hygienic for school children to wash in running water than in a bowl. It is desirable to have lavatory faucets so constructed that a minimum of contact with the hands is required, especially after the hands are washed. Are any of these points scientific?

M. W. T., New York.

*Answer.*—It is difficult to obtain definite statistical evidence on these points. All are agreed that the common drinking cup is mischievous, and yet there seems to have been no decline in diphtheria, scarlet fever or kindred affections that can be definitely attributed to the general introduction of individual drinking cups throughout the country. There is no wish to contribute to the phobia of supercleanliness, but the points brought out in the inquirer's letter all have some value.

It is certainly advantageous to have direct sunlight in toilet rooms.

Washing of the hands before eating is one of the most important and effective of all hygienic habits.

It is better for children to wash in running water. It might be necessary to make exceptions to this when water is scarce.

There is advantage in having faucets of such character that they can be opened without using the hands. It is difficult to say, however, to what extent disease is transmitted by handling faucets.

### Congenital Hydrocephalus

*To the Editor:*—Can you give me any information concerning the cause of congenital hydrocephalus and the probability of its occurrence more than once in the same family?

A. B. C., Connecticut.

*Answer.*—The problem of causation in congenital hydrocephalus has not yet been completely solved. Probably many cases are due to slight changes in the amount of certain mineral salts, like magnesium, sodium, potassium and calcium. Slight disproportion in one or more of these salts in the tissues of the embryo at an early stage of development may produce any one of a large number of anomalies and monstrosities. The kind and extent of such monstrosities and anomalies varies much, depending on the stage of development of the particular embryo. In the majority of cases there is nothing in the history of the mother or the families of the parents or in the state of health of the parents that can be shown to have any causal effect on the embryo.

There is no evidence that hydrocephalus or any other anomaly is likely to occur again in the same family.

### Cod Liver Oil

*To the Editor:*—Is cod liver oil beneficial for a person in rundown health?

W. A. H., California.

*Answer.*—Cod liver oil is helpful in many conditions, for it contains important vitamins and other helpful food material. Whether it would be useful in the condition of the inquirer, only a physician familiar with the patient could say.

### Diet

*To the Editor:*—Will you list for me the foods an adult should have each day in order of their importance. Wherein should a small child's diet vary? Is it true that an adult should never eat two starchy foods at the same meal, such as toast and cereal or potato and bread?

M. T., Utah.

*Answer.*—If one were to choose one food only on which to subsist, milk would come nearest to meeting all the requirements. It is not entirely adequate for an adult, but nevertheless deserves first place on the roll of human foods. Next in importance come other animal foods such as eggs, meat, fish and cheese, but, to make a balanced diet, vegetables, fruit, cereals, bread and butter should not be omitted. Each type of food has its own duties to perform and cannot be entirely replaced by any other type.

A child's diet after 6 months of age should contain milk, cereals and strained vegetable soups. Orange juice and cod liver oil are valuable adjuncts from the second month on. Strained stewed fruits may be added at about ten months, and eggs after eighteen months. After two years, a child's diet should be much the same, more solid foods to be added as the development of the child's teeth warrants.

It makes no difference from how many foods or what foods an adult gets his carbohydrate (starch and sugar) as long as they are not taken to the exclusion of meat and green vegetables.

### Epilepsy

*To the Editor:*—Is there any known cure for epilepsy? Has any person who was once subject to epilepsy outgrown it or recovered from it for some unknown reason? Will the children of epileptics always be subnormal or afflicted in some way? Are there any conditions under which you would sanction the marriage of an epileptic to a normal person?

W. S., New Jersey.

*Answer.*—Some forms of epilepsy may be due to an injury of the brain; others may arise as a result of the presence of a brain tumor or other organic changes in the brain. Still another type is known as idiopathic epilepsy, the cause of which is not definitely known. There is no one specific cure for this type of epilepsy. Some of these cases respond to treatment and the patient may go along without any attacks for many years or may never have other attacks after having taken treatment for a certain length of time. The majority of cases, however, are not completely cured.

It is possible for some persons who have been the subject of epilepsy to outgrow it, so to speak, or to recover from it, without the reason being discovered.

The children of epileptics may not be subnormal or afflicted; on the other hand, subnormal children may give a history of having had epileptic parents. If both parties to a marriage have knowledge of the epileptiform attacks and the normal person is willing to assume the burden, the question of marriage becomes a personal equation. It would be inadvisable for children to be born to such a union.